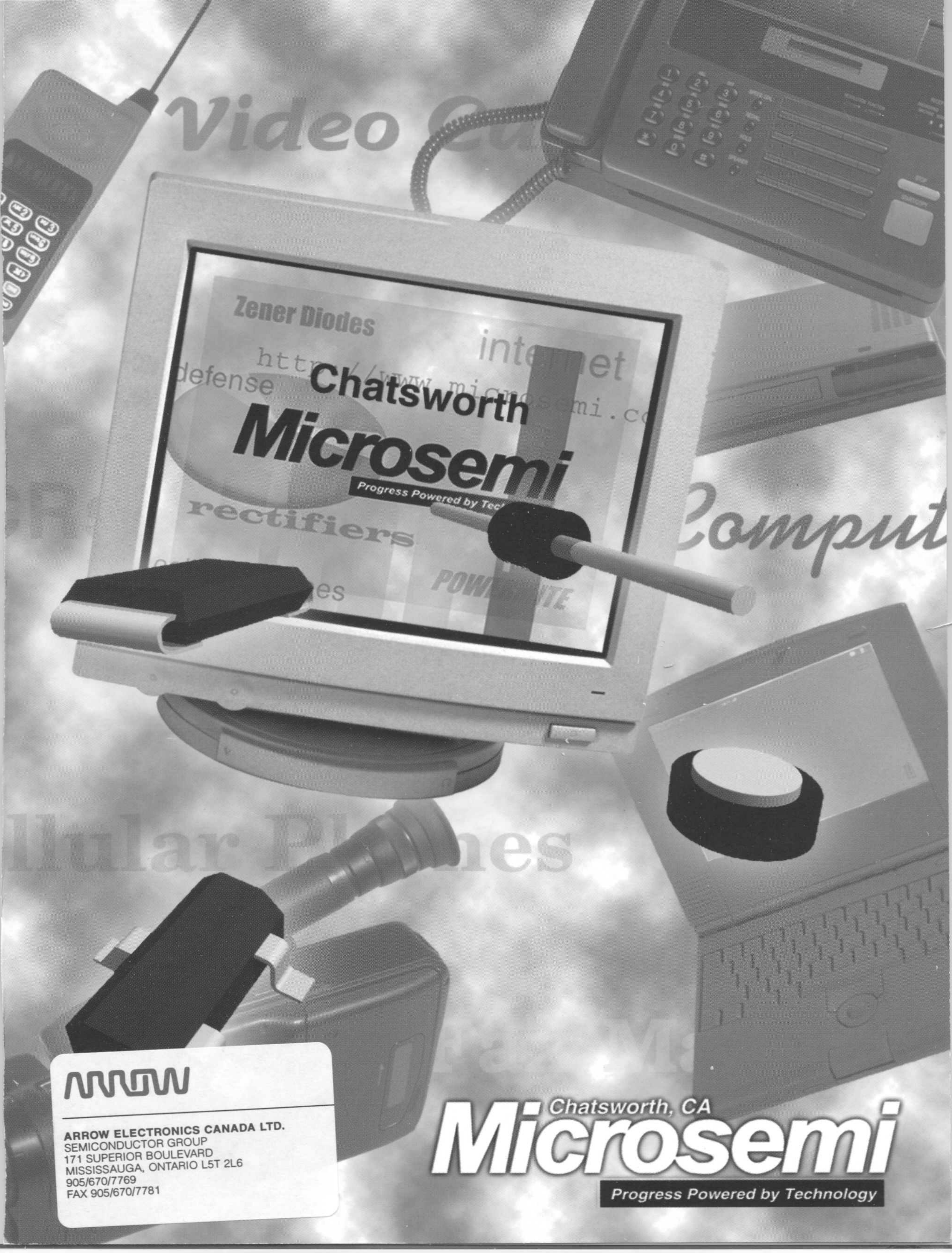
Zener Diodes
internet
defense
Chatsworth
Microsemi
rectifiers
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Phone: (303) 469-2161 ● FAX: (303) 466-3775

Watertown, MA 580 Pleasant St., Watertown, MA 02172
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Ireland Industrial Estate, Gort Road, Ennis, County Clare, Ireland
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Microsemi Corp.-Chatsworth (Micro Commercial Components) is an operation within Microsemi Corporation, dedicated to serving the non-military market by bringing together Microsemi's U.S. high grade die technology and established assembly operations in the United States, Taiwan, Hong Kong, India and Ireland. Microsemi Corp.-Chatsworth is committed to delivering the highest quality, competitively priced products to meet the exacting demands of the non-military electronics market, where quality has now become an over-riding priority.

Following the addition of the Siemens Zener Diode division, Coors Components, Varo Quality Semiconductor, and Unitrode SPD operations, Microsemi Corporation has become the leading diode supplier in the industry, with total product capability in rectifiers, zener diodes, transient suppressors and rectifier assemblies exceeding that of any major competitor. Microsemi also supplies a broad range of chips and is one of few companies capable of supplying high relaibility and high quality glass passivated dice.

This unique combination of die and assembly capabilities positions Microsemi Corp.-Chatsworth to out-perform any other diode manufacturer in quality, reliability, and service. We are dedicated to the highest performance standards which will ensure the ultimate satisfaction of our customers.

Printed in the United States of America
MCC-DB V-1

Section 1

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
100JB05L	MB1505
100JB10L	MB1510
100JB1L	MB151
100JB2L	MB152
100JB4L	MB154
100JB6L	MB156
100JB8L	MB158
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10D10	1N5399
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10DF2	1N4933
10DF4	1N4935
10DF6	1N4936
10DF8	1N4937
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110JB10L	MP1510
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11DF2	UF4003
11DF3	UF4004
11DF4	UF4005
11DQ03	1N5818
11DQ04	1N5819
11DQ06	SR106
1N1907	1N5391
1N1908	1N9392
1N1909	1N5393
1N1911	1N5395
1N1913	1N5397
1N1914	1N5398
1N2069	1N4003
1N2069A	1N4003
1N2070	1N4004
1N2070A	1N4004
1N2071	1N4005
1N2071A	1N4005
1N2482	1N4003
1N2483	1N4004
1N2484	1N4005
1N2609	1N4001

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
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1N2611	1N4003
1N2612	1N4004
1N2613	1N4004
1N2614	1N4005
1N2615	1N4005
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1N2617	1N4007
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1N2859	1N4002
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1N2861	1N4004
1N2862	1N4004
1N2863	1N4005
1N2864	1N4005
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1N3194	1N4004
1N3195	1N4005
1N3196	1N4006
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1N3612	RL204
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1N4817	1N5392
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1N4937	1N4937
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1N4942	1N4942
1N4944	1N4944
1N4946	1N4946
1N4947	1N4947

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
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1N5003	1N5408
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1N5059	1N5393
1N5060	1N5395
1N5061	1N5397
1N5062	1N5398
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1N5186	FR302
1N5187	FR303
1N5189	FR305
1N5190	FR305
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1N5199	1N5402
1N5200	1N5404
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1N5391	1N5391
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1N5404	1N5404
1N5404G	1N5404GP
1N5404GP	1N5404GP
1N5406	1N5406

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
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1N5406GP	1N5406GP
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1N5418	FR304
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1N5551	1N5404
1N5552	1N5406
1N5553	1N5407
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1N5627	1N5407
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1N5803	SF32
1N5804	SF32
1N5805	SF33
1N5806	SF33
1N5807	SF61

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
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1N5809	SF62
1N5810	SF63
1N5811	SF63
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1P646	1N4936
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20E10	RL207
20E2	RL203
20E4	RL204
20E6	RL205
20E8	RL206
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250JB1L	MB251
250JB2L	MB252
250JB4L	MB254

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
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26MB10A	MB251
26MB20A	MB252
26MB40A	MB254
26MB60A	MB256
26MB80A	MB258
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2FBP02	BR82DL
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2FBP10	BR810DL
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2KBP02	BR82DL
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2KBP04M	BR84DL
2KBP06	BR85DL
2KBP06M	BR86DL
2KBP08	BR88DL
2KBP08M	BR88DL
2KBP10	BR810DL
2KBP10M	BR810DL
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30D4	1N5404
30DF1	FR301
30DF2	FR302
30DF4	FR304
30DF6	FR305
30DQ02	1N5820
30DQ03	1N5821

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
30DQ04	1N5822
30DQ05	SR305
30DQ06	SR306
30HB050	MB3505
30HB100	MB3501
30HB200	MB3502
30HB400	MB3504
30HB600	MB3506
30HB800	MB3508
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30S10	1N5408
30S2	1N5402
30S4	1N5404
30S6	1N5406
30S8	1N5407
31DQ02	1N5820
31DQ03	1N5821
31DQ04	1N5822
31DQ05	SR305
31DQ06	SR306
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35MB100A	MB3510
35MB10A	MB351
35MB20A	MB352
35MB40A	MB354
35MB60A	MB356
35MB80A	MB358
36MB05A	MB3505
36MB100A	MB3510
36MB10A	MB351
36MB20A	MB352
36MB40A	MB354
36MB60A	MB356
36MB80A	MB358
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3E10	1N5408
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3E4	1N5404
3E6	1N5406
3E8	1N5407
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3N247	BR81DL
3N248	BR82DL
3N249	BR84DL
3N250	BR86DL

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3N251	BR88DL
3N252	BR810DL
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40SL1	FR302
40SL10	FR307
40SL2	FR303
40SL3	FR304
40SL4	FR304
40SL5	FR305
40SL6	FR305
40SL8	FR306
50SQ020	SR502
50SQ030	SR503
50SQ040	SR504
50SQ050	SR505
50SQ060	SR506
60S05	6A05
60S1	6A1
60S10	6A10
60S2	6A2
60S4	6A4
60S6	6A6
60S8	6A8
6A05	6A05
6A1	6A1
6A10	6A10
6A100	6A10
6A2	6A2
6A20	6A2
6A4	6A4
6A40	6A4
6A6	6A6
6A60	6A6
6A8	6A8
6A80	6A8
6SB050	PB605
6SB100	PB61
6SB200	PB62
6SB400	PB64
6SB600	PB66
80SQ030	SD830
80SQ035	SD840
80SQ040	SD840
80SQ045	SD845
A14A	1N4002GP
A14B	1N4003GP

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
A14C	1N4004GP
A14D	1N4004GP
A14E	1N4005GP
A14F	1N4001GP
A14M	1N4005GP
A14N	1N4006GP
A14P	1N4007GP
A15A	1N5401GP
A15B	1N5402GP
A15C	1N5404GP
A15D	1N5404GP
A15F	1N5401GP
A15M	1N5406GP
A15N	1N5408GP
AR25A	RA251
AR25B	RA252
AR25D	RA253
AR25G	RA254
AR25J	RA255
AR25K	RA256
AR25M	RA257
B120	SK12/SS12
B125C1000	W04M
B125C1500	BR84DL
B125C1500(R)	W04M
B125C2000	BR84DL
B125C500	W04M
B125C800	W04M
B125C800D	DB104
B130	SK13/SS13
B140	SK14/SS14
B150	SK15/SS15
B160	SK16/SS16
B250C1000	W06M
B250C1500	BR86DL
B250C1500(R)	W06M
B250C2000	BR86DL
B250C500	W06M
B250C800	W06M
B250C800D	DB105
B380C1000	W10M
B380C1500	BR810DL
B380C1500(R)	W10M
B380C2000	BR810DL
B380C500	W10M
B380C800	W10M

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
B380C800D	DB107
B40C1000	W01M
B40C1500	BR81DL
B40C1500(R)	W01M
B40C2000	BR81DL
B40C500	W01M
B40C800	W10M
B40C800D	DB101
B500C1500	BR810DL
B500C2000	BR810DL
B80C1000	W02M
B80C1500	BR82DL
B80C1500(R)	W02M
B80C2000	BR82DL
B80C500	W02M
B80C800	W02M
B80C800D	DB103
BA157	1N4936
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BA158	1N4937
BA158GP	1N4937GP
BA159	FR107
BAR42	BAT54
BAR43	BAT54
BAR43A	BAT54A
BAR43C	BAT54C
BAR43S	BAT54S
BAS16	BAS16
BAS19	BAS16
BAT54	BAT54
BAT54A	BAT54A
BAT54C	BAT54C
BAT54S	BAT54S
BAT64	BAT54
BAT64-04	BAT54A
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BAV99	BAV99
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BL2-005	BR805DL
BL2-01	BR81DL
BL2-02	BR82DL
BL2-04	BR84DL
BL2-06	BR86DL

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
BL2-08	BR88DL
BL2-10	BR810DL
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BL4-01	RS402L
BL4-02	RS403L
BL4-04	RS404L
BL4-06	RS405L
BL4-08	RS406L
BL4-10	RS407L
BP10-005	MB1505
BP10-01	MB151
BP10-02	MB152
BP10-04	MB154
BP10-06	MB156
BP10-08	MB158
BP10-10	MB1510
BP15-005	MB1505
BP15-01	MB151
BP15-02	MB152
BP15-04	MB154
BP15-06	MB156
BP15-08	MB158
BP15-10	MB1510
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BP35-02	MB352
BP35-04	MB354
BP35-06	MB356
BP35-08	MB358
BP35-10	MB3510
BP6-005	PB605
BP6-01	PB61
BP6-02	PB62
BP6-04	PB64
BP6-06	PB66
BP6-08	PB68
BP6-10	PB610
BR1505	MB1505
BR151	MB151

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
BR1510	MB1510
BR152	MB152
BR154	MB154
BR156	MB156
BR158	MB158
BR2505	MB2505
BR251	MB251
BR2510	MB2510
BR252	MB252
BR254	MB254
BR256	MB256
BR258	MB258
BR305	PB305
BR31	PB31
BR310	PB310
BR32	PB32
BR34	PB34
BR3505	MB3505
BR351	MB351
BR3510	MB3510
BR352	MB352
BR354	MB354
BR356	MB356
BR358	MB358
BR36	PB36
BR38	PB38
BR605	PB605
BR61	PB61
BR610	PB610
BR62	PB62
BR64	P64
BR66	PB66
BR68	PB68
BR805D	BR805DL
BR810D	BR810DL
BR81D	BR81DL
BR82D	BR82DL
BR84D	BR84DL
BR86D	BR86DL
BR88D	BR88DL
BR805DL	BR805DL
BR810DL	BR810DL
BR81DL	BR81DL
BR82DL	BR82DL
BR84DL	BR84DL
BR86DL	BR86DL

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT	INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT	INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
BR88DL	BR88DL	BYD33J	1N4937GP	BYV27-150	SF23
BY251	1N5402	BYD73A	SF21	BYV27-200	SF24
BY252	1N5404	BYD73B	SF22	BYV27-50	SF21
BY253	1N5406	BYD73C	SF23	BYV28-100	SF32
BY254	1N5407	BYD73D	SF24	BYV28-150	SF33
BY396P	FR302	BYD73F	UF5403	BYV28-200	SF34
BY397P	FR303	BYD73G	UF5404	BYV28-50	SF31
BY398P	FR304	BYD74A	SF31	BYV95A	FR203
BY399P	FR306	BYD74B	SF32	BYV95B	FR204
BY399S	FR307	BYD74C	SF33	BYV95C	FR205
BY500-100	FR602	BYD74D	SF34	BYV95D	FR206
BY500-200	FR603	BYD74F	UF5404	BYV95E	FR207
BY500-400	FR604	BYD74G	UF5404	BYV96D	FR206
BY500-600	FR605	BYM10-100	DL4002	BYV96E	FR207
BY550-100	6A1	BYM10-200	DL4003	BYW100-100	SF22
BY550-1000	6A10	BYM10-400	DL4004	BYW100-150	SF23
BY550-200	6A2	BYM10-50	DL4001	BYW100-200	SF24
BY550-400	6A4	BYM10-600	DL4005	BYW100-50	SF21
BY550-50	6A05	BYM10A-1000	DL4007	BYW27-100	1N4002
BY550-600	6A6	BYM10A-800	DL4006	BYW27-1000	1N4007
BY550-800	6A8	BYM11-100	DL4934	BYW27-1000GP	1N4007GP
BYD11D	1N4003GP	BYM11-200	DL4935	BYW27-100GP	1N4002GP
BYD11G	1N4004GP	BYM11-400	DL4936	BYW27-200	1N4003
BYD11J	1N4005GP	BYM11-50	DL4933	BYW27-200GP	1N4003GP
BYD11K	1N4006GP	BYM11-600	DL4937	BYW27-400	1N4004
BYD11M	1N4007GP	BYM26A	SF24	BYW27-400GP	1N4004GP
BYD13D	1N5402GP	BYM26B	UF5404	BYW27-50	1N4001
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BYD13J	1N5406GP	BYM36B	UF5404	BYW27-600	1N4005
BYD13K	1N5407GP	BYM36C	FR305	BYW27-600GP	1N4005GP
BYD13M	1N5408GP	BYM36D	FR306	BYW27-800	1N4006
BYD14D	1N5402GP	BYM36E	FR307	BYW27-800GP	1N4006GP
BYD14G	1N5404GP	BYM56A	1N5402GP	BYW32	FR303
BYD14J	1N5406GP	BYM56B	1N5404GP	BYW33	FR304
BYD14K	1N5407GP	BYM56C	1N5406GP	BYW34	FR305
BYD14M	1N5408GP	BYM56D	1N5407GP	BYW35	FR306
BYD17D	DL4003	BYM56E	1N5408GP	BYW36	FR307
BYD17G	DL4004	BYT13-1000	FR307	BYW54	1N5406GP
BYD17J	DL4005	BYT13-600	FR305	BYW55	1N5407GP
BYD17K	DL4006	BYT13-800	FR306	BYW56	1N5408GP
BYD17M	DL4007	BYV10-20	1N5817	BYW98-100	SF32
BYD31D	1N4935GP	BYV10-30	1N5818	BYW98-150	SF33
BYD31G	1N4936GP	BYV10-40	1N5819	BYW98-200	SF34
BYD31J	1N4937GP	BYV10-60	SR106	BYW98-50	SF31
BYD333D	1N4935GP	BYV26A	SF14	DAN202C	BAV70
BYD33G	1N4936GP	BYV27-100	SF22	DAN212C	BAS16

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
DAN217C	BAV99
DAP202C	BAW56
DB101	DB101
DB102	DB102
DB103	DB103
DB104	DB104
DB105	DB105
DB106	DB106
DB107	DB107
DB1500T	MB15005
DB1500W	MB15005W
DB1501T	MB151
DB1501W	MB151W
DB1502T	MB152
DB1502W	MB152W
DB1504T	MB154
DB1504W	MB154W
DB1506T	MB156
DB1506W	MB156W
DB1508T	MB158
DB1508W	MB158W
DB1510T	MB1510
DB1510W	MB1510W
DB2500T	MB2505
DB2500W	MB2505W
DB2501T	MB251
DB2501W	MB251W
DB2502T	MB252
DB2502W	MB252W
DB2504T	MB254
DB2504W	MB254W
DB2506T	MB256
DB2506W	MB256W
DB2508W	MB258W
DB2510T	MB2510
DB2510W	MB2510W
DB3500T	MB3505
DB3500W	MB3505W
DB3501T	MB351
DB3501W	MB351W
DB3502T	MB352
DB3502W	MB352W
DB3504T	MB354
DB3504W	MB354W
DB3506T	MB356
DB3506W	MB356W

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
DB3508T	MB358
DB3508W	MB358W
DB3510T	MB3510
DB3510W	MB3510W
DB508T	MB258
DB600W	PB605
DB601W	PB61
DB602W	PB62
DB604W	PB64
DB606W	PB66
DB608W	PB68
DB610W	PB610
DF005	DB101
DF005M	DB101
DF005S	SDB101
DF01	DB102
DF01M	DB102
DF01S	SDB102
DF02	DB103
DF02M	DB103
DF02S	SDB103
DF04	DB104
DF04M	DB104
DF04S	SDB104
DF06	DB105
DF06M	DB105
DF06S	SDB105
DF08	DB106
DF08M	DB106
DF08S	SDB106
DF10	DB107
DF10M	DB107
DF10S	SDB107
DIB005	DB101
DIB01	DB102
DIB02	DB103
DIB04	DB104
DIB06	DB105
DIB08	DB106
DIB10	DB107
DL4001	DL4001
DL4002	DL4002
DL4003	DL4003
DL4004	DL4004
DL4005	DL4005
DL4006	DL4006

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
DL4007	DL4007
DL4148	DL4148
DL4150	DL4150
DL4151	DL4151
DL4154	DL4151
DL4448	DL4448
DL4454	DL4454
DL4933	DL4933
DL4934	DL4934
DL4935	DL4935
DL4936	DL4936
DL4937	DL4937
DL5817	DL5817
DL5818	DL5818
DL5819	DL5819
DLFR106	DLFR106
DLFR107	DLFR107
DLSF11	DLSF11
DLSF12	DLSF12
DLSF13	DLSF13
DLSF14	DLSF14
DLSF16	DLSF16
DLSF18	DLSF18
DLSR105	DLSR105
DLSR106	DLSR106
DR5400GP	1N5400GP
DR5401GP	1N5401GP
DR5402GP	1N5402GP
DR5404GP	1N5404GP
DR5406GP	1N5406GP
DR5407GP	1N5407GP
DR5408GP	1N5408GP
DR750	DR750
DR751	DR751
DR7510	DR7510
DR752	DR752
DR754	DR754
DR756	DR756
DR758	DR758
EGP10A	SF11
EGP10B	SF12
EGP10C	SF13
EGP10D	SF14
EGP10F	UF4004GP
EGP10G	UF4004GP
EGP20A	SF21

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT	INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT	INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
EGP20B	SF22	ERC81-002	1N5820	FB2506	MB256
EGP20C	SF23	ERC81-003	1N5821	FB2506L	MB256W
EGP20D	SF24	ERC81-004	1N5822	FB2508	MB258
EGP20F	UF5404GP	ERC81-005	SR305	FB2508L	MB258W
EGP20G	UF5404GP	ERC81-006	SR306	FB2510	MB2510
EGP30A	SF31	ES1A	ES1A	FB2510L	MB2510W
EGP30B	SF32	ES1B	ES1B	FB3500	MB3505
EGP30C	SF33	ES1D	ES1D	FB3501	MB351
EGP30D	SF34	ES1G	ES1G	FB3502	MB352
EGP30F	UF5404GP	ES1J	ES1J	FB3504	MB354
EGP30G	UF5404GP	ES1K	ES1K	FB3506	MB356
EGP50A	SF61	ES1M	ES1M	FB3508	MB358
EGP50B	SF62	FB1001	MB151	FB3510	MB6510
EGP50C	SF63	FB1001L	MB151W	FBP005	BR805DL
EGP50D	SF64	FB1002	MB152	FBP01	BR81DL
EK02	1N5817	FB1002L	MB152W	FBP02	BR82DL
EK03	1N5818	FB1004	MB154	FBP04	BR84DL
EK04	1N5819	FB1004L	MB154W	FBP06	BR86DL
ER1A	ER1A	FB1006	MB156	FBP08	BR88DL
ER1B	ER1B	FB1006L	MB156W	FBP10	BR810DL
ER1C	ER1C	FB1008	MB158	FBU4A	RS401L
ER1D	ER1D	FB1008L	MB158W	FBU4B	RS402L
ER1G	ER1G	FB1010	MB1510	FBU4D	RS403L
ER1J	ER1J	FB1010L	MB1510W	FBU4G	RS404L
ER3001	UF5400	FB1500	MB1505	FBU4J	RS405L
ER3002	UF5401	FB1500L	MB1505W	FBU4K	RS406L
ER3003	UF5402	FB1501	MB151	FBU4M	RS407L
ER3004	UF5404	FB1501L	MB151	FBU6A	RS601
ER3005	UF5404	FB1502	MB152	FBU6B	RS602
ER3A	ER3A	FB1502L	MB152W	FBU6D	RS603
ER3B	ER3B	FB1504	MB154	FBU6G	RS604
ER3D	ER3D	FB1504L	MB154W	FBU6J	RS605
ER3G	ER3G	FB1506	MB156	FBU6K	RS606
ER3J	ER3J	FB1506L	MB156W	FBU6M	RS607
ER3K	ER3K	FB1508	MB158	FE1A	SF11
ER3M	ER3M	FB1508L	MB158W	FE1B	SF12
ERA81-002	1N5817	FB1510	MB1510	FE1C	SF13
ERA81-003	1N5818	FB1510L	MB1510W	FE1D	SF14
ERA81-004	1N5819	FB2500	MB2505	FE2A	SF21
ERA81-005	SR105	FB2500L	MB2505W	FE2B	SF22
ERA81-006	SR106	FB2501	MB251	FE2C	SF23
ERB81-002	1N5820	FB2501L	MB251W	FE2D	SF24
ERB81-003	1N5821	FB2502	MB252	FE3A	SF31
ERB81-004	1N5822	FB2502L	MB252W	FE3B	SF32
ERB81-005	SR305	FB2504	MB254	FE3C	SF33
ERB81-006	SR306	FB2504L	MB254W	FE3D	SF34

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT	INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT	INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
FE5A	SF61	FR103GP	FR103GP	FR30-08	FR306
FE5B	SF62	FR104	FR104	FR30-10	FR307
FE5C	SF63	FR104G	FR104GP	FR301	FR301
FE5D	SF64	FR104GP	FR104GP	FR302	FR302
FE6A	SF61	FR105	FR105	FR303	FR303
FE6B	SF62	FR105G	FR105GP	FR304	FR304
FE6C	SF63	FR105GP	FR105GP	FR305	FR305
FE6D	SF64	FR106	FR106	FR306	FR306
FF1501	FR202	FR106G	FR106GP	FR307	FR307
FF1502	FR203	FR106GP	FR106GP	FR3A	FR3A
FF1504	FR204	FR107	FR107	FR3B	FR3B
FF1506	FR205	FR107G	FR107GP	FR3D	FR3D
FF1508	FR206	FR107GP	FR107GP	FR3G	FR3G
FF1510	FR207	FR15-005	FR201	FR3J	FR3J
FP100	UF4001	FR15-01	FR202	FR3K	FR3K
FP101	UF4002	FR15-02	FR203	FR3M	FR3M
FP102	UF4003	FR15-04	FR204	FR60-005	FR601
FP103	UF4004	FR15-06	FR205	FR60-01	FR602
FP104	UF4004	FR15-08	FR206	FR60-02	FR603
FP105	UF4005	FR15-10	FR207	FR60-04	FR604
FP106	UF4005	FR1A	FR1A	FR60-06	FR605
FP200	UF5400	FR1B	FR1B	FR601	FR601
FP201	UF5401	FR1D	FR1D	FR602	FR602
FP202	UF5402	FR1G	FR1G	FR603	FR603
FP203	UF5404	FR1J	FR1J	FR604	FR604
FP204	UF5404	FR1K	FR1K	FR605	FR605
FP300	UF5400	FR1M	FR1M	FW100	BR81DL
FP301	UF5401	FR20-005	FR201	FW1000	BR810DL
FP302	UF5402	FR20-01	FR202	FW200	BR82DL
FP303	UF5404	FR20-02	FR203	FW400	BR84DL
FP304	UF5404	FR20-04	FR204	FW50	BR805DL
FR10-005	1N4933	FR20-06	FR205	FW600	BR86DL
FR10-01	1N4934	FR20-08	FR206	FW800	BR88DL
FR10-02	1N4935	FR20-10	FR207	FWL100	BR81DL
FR10-04	1N4936	FR201	FR201	FWL1000	BR810DL
FR10-06	1N4937	FR202	FR202	FWL200	BR82DL
FR10-08	FR106	FR203	FR203	FWL300	BR84DL
FR10-10	FR107	FR204	FR204	FWL400	BR84DL
FR101	FR101	FR205	FR205	FWL50	BR805DL
FR101G	FR101GP	FR206	FR206	FWL500	BR86DL
FR101GP	FR101GP	FR207	FR207	FWL600	BR86DL
FR102	FR102	FR30-005	FR301	FWL700	BR88DL
FR102G	FR102GP	FR30-01	FR302	FWL800	BR88DL
FR102GP	FR102GP	FR30-02	FR303	FWLA100	BR81DL
FR103	FR103	FR30-04	FR304	FWLA1000	BR810DL
FR103G	FR103GP	FR30-06	FR305	FWLA200	BR82DL

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
FWLA300	BR84DL
FWLA400	BR84DL
FWLA50	BR805DL
FWLA500	BR86DL
FWLA600	BR86DL
FWLA700	BR88DL
FWLA800	BR88DL
FWLC100	RS402L
FWLC100	RS402L
FWLC1000	RS407L
FWLC200	RS403L
FWLC300	RS404L
FWLC400	RS404L
FWLC50	RS401L
FWLC500	RS405L
FWLC600	RS405L
FWLC700	RS406L
FWLC800	RS406L
FWLD100	RS602
FWLD1000	RS607
FWLD200	RS603
FWLD300	RS604
FWLD400	RS604
FWLD50	PB605
FWLD500	RS605
FWLD600	RS605
FWLD700	RS606
FWLD800	RS606
G1A	1N4001GP
G1B	1N4002GP
G1D	1N4003GP
G1G	1N4004GP
G1J	1N4005GP
G1K	1N4006GP
G1M	1N4007GP
G2A	1N5400GP
G2B	1N5401GP
G2D	1N5402GP
G2G	1N5404GP
G2J	1N5406GP
G2K	1N5407GP
G2M	1N5408GP
G3A	1N5400GP
G3B	1N5401GP
G3D	1N5402GP
G3G	1N5404GP

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
G3J	1N5406GP
G3K	1N5407GP
G3M	1N5408GP
GF1A	S1A
GF1B	S1B
GF1D	S1D
GF1G	S1G
GF1J	S1J
GF1K	S1K
GF1M	S1M
GI1001	SF11
GI1002	SF12
GI1003	SF13
GI1004	SF14
GI1101	SF31
GI1102	SF32
GI1103	SF33
GI1104	SF34
GI1301	SF61
GI1302	SF62
GI1303	SF63
GI1304	SF64
GI250-1	R1500
GI250-2	R2000
GI250-3	R3000
GI2500	RA251
GI2501	RA252
GI2502	RA253
GI2504	RA254
GI2506	RA255
GI2508	RA256
GI2510	RA257
GI500	1N5400
GI501	1N5401
GI502	1N5402
GI504	1N5404
GI506	1N5406
GI508	1N5407
GI510	1N5408
GI5823	SD830
GI5824	SD830
GI5825	SD845
GI750	6A05
GI751	6A1
GI752	6A2
GI754	6A4

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
GI756	6A6
GI758	6A8
GI810	1N4933GP
GI811	1N4934GP
GI812	1N4935GP
GI814	1N4936GP
GI816	1N4937GP
GI820	FR601
GI821	FR602
GI822	FR603
GI824	FR604
GI826	FR605
GI850	FR301
GI851	FR302
GI852	FR303
GI854	FR304
GI856	FR305
GI910	FR301
GI911	FR302
GI912	FR303
GI914	FR304
GI916	FR305
GI917	FR306
GI918	FR307
GL41A	DL4001
GL41B	DL4002
GL41D	DL4003
GL41G	DL4004
GL41J	DL4005
GL41K	DL4006
GL41M	DL4007
GP02-20	R2000
GP02-25	R3000
GP02-30	R3000
GP05-10	R1500
GP05-15	R1500
GP05-18	R2000
GP05-20	R2000
GP08A	1N4001GP
GP08B	1N4002GP
GP08D	1N4003GP
GP08G	1N4004GP
GP08J	1N4005GP
GP10-005	1N4001
GP10-01	1N4002
GP10-02	1N4003

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
GP10-04	1N4004
GP10-06	1N4005
GP10-08	1N4006
GP10-10	1N4007
GP100	1N4001
GP101	1N4002
GP102	1N4003
GP103	1N4004
GP104	1N4004
GP105	1N4005
GP106	1N4005
GP108	1N4006
GP10A	1N4001GP
GP10B	1N4002GP
GP10D	1N4003GP
GP10G	1N4004GP
GP10J	1N4005GP
GP10K	1N4006GP
GP10M	1N4007GP
GP15-005	1N5391
GP15-01	1N5392
GP15-02	1N5393
GP15-04	1N5395
GP15-06	1N5397
GP15-08	1N5398
GP15-10	1N5399
GP20-005	RL201
GP20-01	RL202
GP20-02	RL203
GP20-04	RL204
GP20-06	RL205
GP20-08	RL206
GP20-10	RL207
GP200	RL201
GP201	RL202
GP202	RL203
GP203	RL204
GP204	RL204
GP205	RL205
GP206	RL205
GP208	RL206
GP210	RL207
GP25A	1N5400GP
GP25B	1N5401GP
GP25D	1N5402GP
GP25G	1N5404GP
GP25J	1N5406GP
GP25K	1N5407GP
GP25M	1N5408GP
GP30-005	1N5400
GP30-01	1N5401
GP30-02	1N5402
GP30-04	1N5404
GP30-06	1N5406
GP30-08	1N5407
GP30-10	1N5408
GP300	1N5400
GP301	1N5401
GP302	1N5402
GP303	1N5403
GP304	1N5404
GP305	1N5405
GP306	1N5406
GP308	1N5407
GP30A	1N5400GP
GP30B	1N5401GP
GP30D	1N5420GP
GP30G	1N5404GP
GP30J	1N5406GP
GP30K	1N5407GP
GP30M	1N5408GP
GP310	1N5408
GP60-005	6A05
GP60-01	6A1
GP60-02	6A2
GP60-04	6A4
GP60-06	6A6
GP60-08	6A8
GP60-10	6A10
GP600	6A05
GP601	6A1
GP602	6A2
GP603	6A4
GP604	6A4
GP605	6A6
GP606	6A6
GP608	6A8
GP610	6A10
GPP10A	1N4001GP
GPP10B	1N4002GP
GPP10D	1N4003GP
GPP10G	1N4004GP
GPP10J	1N4005GP
GPP10K	1N4006GP
GPP10M	1N4007GP
GPP30A	1N5400GP
GPP30B	1N5401GP
GPP30D	1N5402GP
GPP30G	1N5404GP
GPP30J	1N5406GP
GPP30K	1N5407GP
GPP30M	1N5408GP
GPP60A	6A05
GPP60B	6A1
GPP60D	6A2
GPP60G	6A4
GPP60J	6A6
GPP60K	6A8
GPP60M	6A10
H1601-1	R1500F
H1601-1.5	R1500F
H1601-2	R2000F
H1601-3	R3000F
H1651-1	1N4007
H1651-1.5	R1500
H1651-2	R2000
H1651-3	R3000
HAB005	1N5400
HAB010	1N5401
HAB020	1N502
HAB040	1N5404
HAB060	1N5406
HAB080	1N5407
HAB100	1N5408
HER101	UF4001
HER102	UF4002
HER103	UF4003
HER104	UF4004
HER105	UF4004
HER106	UF4005
HER301	UF5400
HER302	UF5401
HER303	UF5402
HER304	UF5404
HER305	UF5404
HER306	UF5406
HR100	1N5401
HR1000	1N5408

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT	INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT	INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
HR200	1N5402	KBPC15-02	MB152	KBPC610	PB610
HR400	1N5404	KBPC15-04	MB154	KBPC8005	MB805
HR600	1N5406	KBPC15-06	MB156	KBPC801	MB81
HR800	1N5407	KBPC15-08	MB158	KBPC802	MB82
HSMS2812	BAT54S	KBPC15-10	MB1510	KBPC804	MB84
HSMS2822	BAT54S	KBPC15005	MB1505	KBPC806	MB86
I850	FR301	KBPC1501	MB151	KBPC808	MB88
IMBD4148	MMBD4148	KBPC1502	MB152	KBPC810	MB810
IMBT3904	MMBT3904	KBPC1504	MB154	KBU6A	RS601
IMBT3906	MMBT3906	KBPC1506	MB156	KBU6B	RS602
IMBT4148	MMBD4148	KBPC1508	MB158	KBU6D	RS603
J05	1N5391	KBPC1510	MB1510	KBU6G	RS604
J1	1N5392	KBPC25-005	MB2505	KBU6J	RS605
J10	1N5399	KBPC25-01	MB251	KBU6K	RS606
J2	1N5393	KBPC25-02	MB252	KBU6M	RS607
J4	1N5395	KBPC25-04	MB254	LL4150	DL4150
J6	1N5397	KBPC25-06	MB256	LL4151	DL4151
J8	1N5398	KBPC25-08	MB258	LL4154	DL4154
K005	MB2505	KBPC25-10	MB2510	LL4448	DL4448
K01	MB251	KBPC25005	MB2505	LL4454	DL4454
K02	MB252	KBPC2501	MB251	LT2A01	RL201
K04	MB254	KBPC2502	MB252	LT2A02	RL202
K06	MB256	KBPC2504	MB254	LT2A03	RL203
KBF005	RS401L	KBPC2506	MB256	LT2A04	RL204
KBF01	RS402L	KBPC2508	MB258	LT2A05	RL205
KBF02	RS403L	KBPC2510	MB2510	LT2A06	RL206
KBF04	RS404L	KBPC35-005	MB3505	LT2A07	RL207
KBF06	RS405L	KBPC35-01	MB351	LT6A01	6A1
KBF08	RS406L	KBPC35-02	MB352	LT6A02	6A2
KBF10	RS407L	KBPC35-04	MB354	LT6A04	6A4
KBL005	RS401L	KBPC35-06	MB356	LT6A06	6A6
KBL01	RS402L	KBPC35-08	MB358	LT6A08	6A8
KBL02	RS403L	KBPC35-10	MB3510	LT6A10	6A10
KBL04	RS404L	KBPC35005	MB3505	M100A	1N4001
KBL06	RS405L	KBPC3501	MB351	M100B	1N4002
KBL08	RS406L	KBPC3502	MB352	M100D	1N4003
KBL10	RS407L	KBPC3504	MB354	M100G	1N4004
KBPC1005	PB305	KBPC3506	MB356	M100J	1N4005
KBPC101	PB31	KBPC3508	MB358	M100K	1N4006
KBPC102	PB32	KBPC3510	MB3510	M100M	1N4007
KBPC104	PB34	KBPC6005	PB605	MB11A06V05	PB605
KBPC106	PB36	KBPC601	PB61	MB11A06V10	PB61
KBPC108	PB38	KBPC602	PB62	MB11A06V100	PB610
KBPC110	PB310	KBPC604	PB64	MB11A06V20	PB62
KBPC15-005	MB1505	KBPC606	PB66	MB11A06V40	PB64
KBPC15-01	MB151	KBPC608	PB68	MB11A06V60	PB66

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
MB11A06V80	PB68
MB12A10V05	MB1505
MB12A10V10	MB151
MB12A10V20	MB152
MB12A10V40	MB154
MB12A10V60	MB156
MB12A10V80	MB158
MB12A25V05	MB2505
MB12A25V10	MB251
MB12A25V20	MB252
MB12A25V40	MB254
MB12A25V60	MB256
MB12A25V80	MB258
MB12A35V05	MB3505
MB12A35V10	MB351
MB12A35V20	MB352
MB12A35V40	MB354
MB12A35V60	MB356
MB12A35V80	MB358
MB15005	MB1505
MB15005W	MB1505W
MB1501	MB151
MB1501W	MB151W
MB1502	MB152
MB1502W	MB152W
MB1504	MB154
MB1504W	MB154W
MB1506	MB156
MB1506W	MB156W
MB1508	MB158
MB1508W	MB158W
MB1510	MB1510
MB1510W	MB1510W
MB25005	MB2505
MB25005W	MB2505W
MB2501	MB251
MB2501W	MB251W
MB2502	MB252
MB2502W	MB252W
MB2504	MB254
MB2504W	MB254W
MB2506	MB256
MB2506W	MB256W
MB2508	MB258
MB2508W	MB258W
MB2510	MB2510

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
MB2510W	MB2510W
MB35005	MB3505
MB35005W	MB3505W
MB3501	MB351
MB3501W	MB351W
MB3502	MB352
MB3502W	MB352W
MB3504	MB354
MB3504W	MB354W
MB3506	MB356
MB3506W	MB356W
MB3508	MB358
MB3508W	MB358W
MB3510	MB3510
MB3510W	MB3510W
MB805	MB805
MB81	MB81
MB810	MB810
MB82	MB82
MB84	MB84
MB86	MB86
MB88	MB88
MBR030	1N5818
MBR040	1N5819
MBR115P	1N5817
MBR120	1N5817
MBR120P	1N5817
MBR130	1N5818
MBR130P	1N5818
MBR140	1N5819
MBR140P	1N5819
MBR150	SR105
MBR160	SR106
MBR320	1N5820
MBR320P	1N5820
MBR330	1N5821
MBR330P	1N5821
MBR340	1N5822
MBR340P	1N5822
MBR350	SR305
MBR360	SR306
MBRL120	DL5817
MBRL130	DL5818
MBRL140	DL5819
MBRS120	SK12
MBRS130	SK13

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
MBRS140	SK14
MBRS320	SK32
MBRS330	SK33
MBRS340	SK34
MC5600	R1500
MC5601	R2000
MC5602	R3000
MC5603	R3000
MC5610	R1500F
MC5611	R2000F
MC5612	R3000F
MC5613	R1500F
MC5614	R2000F
MC5615	R3000F
MC5616	R3000F
MDA100	BR805DL
MDA101	BR81DL
MDA102	BR82DL
MDA104	BR84DL
MDA106	BR86DL
MDA200	BR805DL
MDA201	BR81DL
MDA202	BR82DL
MDA204	BR84DL
MDA206	BR86DL
MDA2500	MB2505
MDA2501	MB251
MDA2502	MB252
MDA2504	MB254
MDA2506	MB256
MDA2508	MB258
MDA2550	MB2505
MDA2551	MB251
MDA3500	MB3505
MDA3501	MB351
MDA3502	MB352
MDA3504	MB354
MDA3506	MB356
MDA3508	MB358
MDA3510	MB3510
MDA400	RS401L
MDA401	RS402L
MDA402	RS403L
MDA404	RS404L
MDA406	RS405L
MDA408	RS406L

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
MDA960-1	RS401L
MDA960-2	RS402L
MDA960-3	RS403L
MDA960-4	RS404L
MDA960-5	RS404L
MDA960-6	RS405L
MDA960-7	RS406L
MDA970G1	RS401L
MDA970G2	RS402L
MDA970G3	RS403L
MDA970G5	RS404L
MDA970G6	RS405L
MDA980-1	MB1505
MDA980-2	MB151
MDA980-3	MB152
MDA980-4	MB154
MDA980-5	MB154
MDA980-6	MB156
MDA990-1	MB3505
MDA990-2	MB351
MDA990-3	MB352
MDA990-4	MB354
MDA990-5	MB354
MDA990-6	MB356
MLL4001	DL4001
MLL4002	DL4002
MLL4003	DL4003
MLL4004	DL4004
MLL4148	DL4148
MMBD2835	BAW56
MMBD2836	BAW56
MMBD2837	BAV70
MMBD2838	BAV70
MMBD6100	BAV70
MMBD7000	MMBD7000
MMBD914	MMBD914
MMBT2222A	MMBT2222A
MMBT2907A	MMBT2907A
MMBT3904	MMBT3904
MMBT3906	MMBT3906
MMBT4401	MMBT4401
MMBT4403	MMBT4403
MP15005	MB1505
MP15005W	MB1505W
MP1501	MB151
MP1501W	MB151W

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
MP1502	MB152
MP1502W	MB152W
MP1504	MB154
MP1504W	MB154W
MP1506	MB156
MP1506W	MB156W
MP1508	MB158
MP1508W	MB158W
MP1510	MB1510
MP1510W	MB1510W
MP25005	MB2505
MP25005W	MB2505W
MP2501	MB251
MP2501W	MB251W
MP2502	MB252
MP2502W	MB252W
MP2504	MB254
MP2504W	MB254W
MP2506	MB256
MP2506W	MB256W
MP2508	MB258
MP2508W	MB258W
MP2510	MB2510
MP2510W	MB2510W
MP35005	MB3505
MP35005W	MB3505W
MP3501	MB351
MP3501W	MB351W
MP3502	MB352
MP3502W	MB352W
MP3504	MB354
MP3504W	MB354W
MP3506	MB356
MP3506W	MB356W
MP3508	MB358
MP3508W	MB358W
MP3510	MB3510
MP3510W	MB3510W
MR1001	FR101
MR1002	FR102
MR1003	FR103
MR1004	FR104
MR1005	FR105
MR1006	FR106
MR1007	FR107
MR2500	RA251

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
MR2501	RA252
MR2502	RA253
MR2504	RA254
MR2506	RA255
MR2508	RA256
MR2510	RA257
MR3001	FR301
MR3002	FR302
MR3003	FR303
MR3004	FR304
MR3005	FR305
MR3006	FR306
MR3007	FR307
MR500	1N5400
MR501	1N5401
MR502	1N5402
MR504	1N5404
MR506	1N5406
MR508	1N5407
MR510	1N5408
MR750	6A05
MR751	6A1
MR7510	6A10
MR752	6A2
MR754	6A4
MR756	6A6
MR758	6A8
MR810	1N4933
MR811	1N4934
MR812	1N4935
MR813	1N4936
MR814	1N4936
MR816	1N4937
MR817	FR106
MR818	FR107
MR820	FR601
MR821	FR602
MR822	FR603
MR824	FR604
MR826	FR605
MR830	FR301
MR831	FR302
MR832	FR303
MR834	FR304
MR836	FR305
MR850	FR301

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
MR851	FR302
MR852	FR303
MR854	FR304
MR856	FR305
MR910	FR301
MR911	FR302
MR912	FR303
MR914	FR304
MR916	FR305
MR917	FR306
MR918	FR307
MSB05	DB101
MSB1	DB102
MSB10	DB107
MSB2	DB103
MSB4	DB104
MSB6	DB105
MSB8	DB106
MUR105	MUR105
MUR110	MUR110
MUR1100	MUR1100
MUR1100E	MUR1100
MUR115	MUR115
MUR120	MUR120
MUR130	MUR140
MUR140	MUR140
MUR150	MUR160
MUR160	MUR160
MUR170E	MUR170
MUR180	MUR180
MUR180E	MUR180
MUR190E	MUR1100
MUR405	MUR405
MUR410	MUR410
MUR4100	MUR4100
MUR4100E	MUR4100
MUR415	MUR415
MUR420	MUR420
MUR440	MUR440
MUR460	MUR460
MUR480	MUR480
MUR480E	MUR480
P300A	1N5400
P300B	1N5401
P300D	1N5404
P300G	1N5404

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
P300J	1N5406
P300K	1N5407
P300M	1N5408
P600A	6A05
P600B	6A1
P600D	6A2
P600G	6A4
P600J	6A6
P600K	6A8
P600M	6A10
PA05	MB1505
PA10	MB151
PA100	MB1510
PA20	MB152
PA40	MB154
PA60	MB156
PA80	MB158
PB05	MB2505
PB10	MB251
PB100	MB2510
PB151M	W005M
PB152M	W01M
PB153M	W02M
PB154M	W04M
PB155M	W06M
PB156M	W08M
PB157M	W10M
PB20	MB252
PB40	MB254
PB60	MB256
PB605	PB605
PB61	PB61
PB610	PB610
PB62	PB62
PB64	PB64
PB66	PB66
PB68	PB68
PB80	MB258
PBDF005	DB101
PBDF01	DB102
PBDF02	DB103
PBDF04	DB104
PBDF06	DB105
PBDF08	DB106
PBDF10	DB107
PBDF101	DB101

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
PBDF102	DB102
PBDF103	DB103
PBDF104	DB104
PBDF105	DB105
PBDF106	DB106
PBDF107	DB107
PBF251	RS401L
PBF252	RS402L
PBF253	RS403L
PBF254	RS404L
PBF255	RS405L
PBF256	RS406L
PBF257	RS407L
PBF301	RS401L
PBF302	RS402L
PBF303	RS403L
PBF304	RS404L
PBF305	RS405L
PBF306	RS406L
PBF307	RS407L
PBL301	RS401L
PBL302	RS402L
PBL303	RS403L
PBL304	RS404L
PBL305	RS405L
PBL306	RS406L
PBL307	RS407L
PBL401	RS401L
PBL402	RS402L
PBL403	RS403L
PBL404	RS404L
PBL405	RS405L
PBL406	RS406L
PBL407	RS407L
PBM151	W005M
PBM152	W01M
PBM153	W02M
PBM154	W04M
PBM155	W06M
PBM156	W08M
PBM157	W10M
PBP151	BR805DL
PBP152	BR81DL
PBP153	BR82DL
PBP154	BR84DL
PBP155	BR86DL

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
PBP156	BR88DL
PBP157	BR810DL
PBP201	BR805DL
PBP202	BR81DL
PBP203	BR82DL
PBP204	BR84DL
PBP205	BR86DL
PBP206	BR88DL
PBP207	BR810DL
PBPC301	PB305
PBPC302	PB31
PBPC303	PB32
PBPC304	PB34
PBPC305	PB36
PBPC306	PB38
PBPC307	PB310
PBPC601	PB605
PBPC602	PB61
PBPC603	PB62
PBPC604	PB64
PBPC605	PB66
PBPC606	PB68
PBPC607	PB610
PBPC801	BR805DL
PBPC802	MB81
PBPC803	BR82DL
PBPC804	MB84
PBPC805	BR86DL
PBPC806	MB88
PBPC807	BR810DL
PBU601	RS601
PBU602	RS602
PBU603	RS603
PBU604	RS604
PBU605	RS605
PBU607	RS606
PBU608	RS607
PD05	BR805DL
PD10	BR81DL
PD100	BR810DL
PD20	BR82DL
PD40	BR84DL
PD60	BR86DL
PD80	BR88DL
PE05	RS401L
PE10	RS402L

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
PE100	RS407L
PE20	RS403L
PE40	RS404L
PE60	RS405L
PE80	RS406L
PF05	W005M
PF10	W01M
PF100	W10M
PF20	W02M
PF40	W04M
PF60	W06M
PF80	W08M
PFR851	FR302
PFR852	FR303
PFR854	FR304
PFR856	FR305
PH05	RS401L
PH10	RS402L
PH100	RS407L
PH20	RS403L
PH40	RS404L
PH60	RS405L
PH80	RS406L
PHS1001	SF11
PHS1002	SF12
PHS1003	SF13
PHS1101	SF21
PHS1102	SF22
PHS1103	SF23
PHS1104	SF24
PL05	DB101
PL10	DB102
PL100	DB107
PL20	DB103
PL40	DB104
PL60	DB105
PL80	DB106
PLQ08	SF12
PLQ1	SF12
PMBD2836	BAW56
PMBD2838	BAV70
PMBT3904	MMBT3904
PMBT3906	MMBT3906
PP05	PB605
PP10	PB61
PP100	PB610

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
PP20	PB62
PP40	PB64
PP60	PB66
PP80	PB68
PR1001	FR101
PR1001G	1N4933GP
PR1002	FR102
PR1002G	1N4934GP
PR1003	FR103
PR1003G	1N4935GP
PR1004	FR104
PR1004G	1N4936GP
PR1005	FR105
PR1005G	1N4937GP
PR1006	FR106
PR1007	FR107
PR3001	FR301
PR3002	FR302
PR3003	FR303
PR3004	FR304
PR3005	FR305
PR3006	FR306
PR3007	FR307
PR6001	FR601
PR6002	FR602
PR6003	FR603
PR6004	FR604
PR6005	FR605
PR6006	FR606
PR6007	FR607
PRLL4001	DL4001
PRLL4002	DL4002
PRLL5817	DL5817
PRLL5818	DL5818
PRLL5819	DL5819
PW005	PB605
PW01	PB61
PW02	PB62
PW04	PB64
PW06	PB66
PW08	PB68
PW10	PB610
R1200	R1500
R1200F	R1500F
R1500	R1500
R1500F	R1500F

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
R1800	R2000
R1800F	R2000F
R2000	R2000
R2000F	R2000F
R3000	R3000
R3000F	R3000F
R3400006	6A05
R34001006	6A10
R3400106	6A1
R3400206	6A2
R3400406	6A4
R3400606	6A6
R3400806	6A8
RA351	RA351
RA352	RA352
RA353	RA353
RA354	RA354
RA355	RA355
RA356	RA356
RA357	RA357
RB151	RB151
RB152	RB152
RB153	RB153
RB154	RB154
RB155	RB155
RB156	RB156
RB157	RB157
RB421D	BAT54
RB425D	BAT54C
RB450F	BAT54
RB715F	BAT54C
RB717F	BAT54A
RF200B	R2000F
RG1A	1N4933GP
RG1B	1N4934GP
RG1D	1N4935GP
RG1G	1N4936GP
RG1J	1N4937GP
RGL41A	DL4933
RGL41B	DL4934
RGL41D	DL4935
RGL41G	DL4936
RGL41J	DL4937
RGP02-12E	R1500F
RGP02-14E	R1500F
RGP02-16E	R2000F

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
RGP02-18E	R2000F
RGP02-20E	R2000F
RGP10A	1N4933GP
RGP10B	1N4934GP
RGP10D	1N4935GP
RGP10G	1N4936GP
RGP10J	1N4937GP
RK42	1N5820
RK43	1N5821
RK44	1N5822
RL101	RL101
RL102	RL102
RL103	RL103
RL104	RL104
RL105	RL105
RL106	RL106
RL107	RL107
RL201	RL201
RL202	RL202
RL203	RL203
RL204	RL204
RL205	RL205
RL206	RL206
RL207	RL207
RL251	RL251
RL252	RL252
RL253	RL253
RL254	RL254
RL255	RL255
RL256	RL256
RL257	RL257
RL500	1N5400
RL501	1N5401
RL502	1N5402
RL504	1N5404
RL506	1N5406
RL508	1N5407
RL510	1N5408
RL710	6A10
RL750	6A05
RL751	6A1
RL752	6A2
RL754	6A4
RL756	6A6
RL758	6A8
RLR4001	DL4001

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
RLR4002	DL4002
RLR4003	DL4003
RLR4004	DL4004
RLS4148	DL4148
RMPG06A	1N4933GP
RMPG06B	1N4934GP
RMPG06D	1N4935GP
RMPG06G	1N4936GP
RMPG06J	1N4937GP
RP100	FR101
RP101	FR102
RP102	FR103
RP103	FR104
RP104	FR104
RP105	FR105
RP106	FR105
RP108	FR106
RP110	FR107
RP150	FR201
RP151	FR202
RP152	FR203
RP153	FR204
RP154	FR204
RP155	FR205
RP156	FR205
RP158	FR206
RP200	FR301
RP201	FR302
RP202	FR303
RP203	FR304
RP204	FR304
RP205	FR305
RP206	FR305
RP208	FR306
RP210	FR307
RP300A	FR301
RP300B	FR302
RP300D	FR303
RP300G	FR304
RP300J	FR305
RP300K	FR306
RP300M	FR307
RP600	FR601
RP601	FR602
RP602	FR603
RP603	FR604

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
RP604	FR604
RP605	FR605
RP606	FR605
RS1A	FS1A
RS1B	FS1B
RS1D	FS1D
RS1G	FS1G
RS1J	FS1J
RS1K	FS1K
RS1K	FS1M
RS101	BR805DL
RS102	BR81DL
RS103	BR82DL
RS104	BR84DL
RS105	BR86DL
RS106	BR88DL
RS107	BR810DL
RS201L	BR805DL
RS202L	BR81DL
RS203L	BR82DL
RS204L	BR84DL
RS205L	BR86DL
RS206L	BR88DL
RS207L	BR810DL
RS401L	RS401L
RS402L	RS402L
RS403L	RS403L
RS404L	RS404L
RS405L	RS405L
RS406L	RS406L
RS407L	RS407L
RS601	RS601
RS602	RS602
RS603	RS603
RS604	RS604
RS605	RS605
RS606	RS606
RS607	RS607
S1A	S1A/GS1A
S1A05F	1N4933
S1A1F	1N4934
S1A2F	1N4935
S1A3F	1N4936
S1A4F	1N4936
S1A5F	1N4937
S1A6F	1N4937

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
S1AB	S1A
S1B	S1B/GS1B
S1BB	S1B
S1D	S1D/GS1D
S1DB	S1D
S1G	S1G/GS1G
S1GB	S1G
S1J	S1J/GS1J
S1JB	S1J
S1K	S1K/GS1K
S1KB	S1K
S1M	S1M/GS1M
S1MB	S1M
S1S2M	1N5817
S1S3M	1N5818
S1S4M	1N5819
S1S6M	SR106
S2A	S2A
S2B	S2B
S2D	S2D
S2G	S2G
S2J	S2J
S2K	S2K
S2M	S2M
S3A	S3A
S3A05	1N5400
S3A05F	FR301
S3A1	1N5401
S3A10	1N5408
S3A10F	FR307
S3A1F	FR302
S3A2	1N5402
S3A2F	FR303
S3A4	1N5404
S3A4F	FR304
S3A6	1N5406
S3A6F	FR305
S3A8	1N5407
S3A8F	FR306
S3B	S3B
S3D	S3D
S3G	S3G
S3J	S3J
S3K	S3K
S3M	S3M
S3S2M	1N5820

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
S3S3M	1N5821
S3S4M	1N5822
S3S6M	SR306
S52	6A2
S5A05	6A05
S5A05F	FR601
S5A1	6A1
S5A10	6A10
S5A10F	FR607
S5A1F	FR602
S5A2F	FR603
S5A4	6A4
S5A4F	FR604
S5A6	6A6
S5A6F	FR605
S5A8	6A8
S5A8F	FR606
S5S2M	SR502
S5S3M	SR503
S5S4M	SR504
S5S5M	SR505
S5S6M	SR506
S6A05	6A05
S6A1	6A1
S6A10	6A10
S6A2	6A2
S6A4	6A4
S6A6	6A6
S6A8	6A8
SB120	1N5817
SB130	1N5818
SB140	1N5819
SB150	SR105
SB1505	MB1505
SB151	MB151
SB1510	MB1510
SB152	MB152
SB154	MB154
SB156	MB156
SB158	MB158
SB160	SR106
SB200	BR805DL
SB201	BR81DL
SB202	BR82DL
SB203	BR84DL
SB204	BR84DL

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
SB205	BR86DL
SB206	BR86DL
SB207	BR88DL
SB208	BR88DL
SB210	BR810DL
SB2505	MB2505
SB251	MB251
SB2510	MB2510
SB252	MB252
SB254	MB254
SB256	MB256
SB258	MB258
SB320	1N5820
SB330	1N5821
SB340	1N5822
SB350	SR305
SB3505	MB3505
SB351	MB351
SB3510	MB3510
SB352	MB352
SB354	MB354
SB356	MB356
SB358	MB358
SB360	SR306
SB400	RS401L
SB401	RS402L
SB402	RS403L
SB403	RS404L
SB404	RS404L
SB405	RS405L
SB406	RS405L
SB407	RS406L
SB408	RS406L
SB410	RS407L
SB520	SR502
SB530	SR503
SB540	SR504
SB550	SR505
SB560	SR506
SB601	PB605
SB602	PB61
SB603	PB62
SB604	PB64
SB605	PB66
SB606	PB68
SB607	PB610

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
SB830	SD830
SB840	SD840
SBR10A05	MB1505
SBR10A1	MB151
SBR10A10	MB1510
SBR10A2	MB152
SBR10A4	MB154
SBR10A6	MB156
SBR10A8	MB158
SBR6A05	MB1505
SBR6A1	MB151
SBR6A10	MB1510
SBR6A2	MB152
SBR6A4	MB154
SBR6A6	MB156
SBR6A8	MB158
SD830	SD830
SD840	SD840
SD845	SD845
SDA980-1	MB1505
SDA980-2	MB151
SDA980-3	MB152
SDA980-5	MB154
SDA980-6	MB156
SDA980-8	MB158
SDA985-1	MB1505W
SDA985-2	MB151W
SDA985-3	MB152W
SDA985-4	MB154W
SDA985-5	MB154W
SDA985-6	MB156W
SDA985-8	MB158W
SDA990-1	MB3505
SDA990-10	MB2510
SDA990-2	MB351
SDA990-3	MB252
SDA990-4	MB354
SDA990-5	MB354
SDA990-6	MB256
SDA990-8	MB358
SDB101	SDB101
SDB102	SDB102
SDB103	SDB103
SDB104	SDB104
SDB105	SDB105
SDB106	SDB106

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
SDB107	SDB107
SF-02	SF14
SF10-005	SF11
SF10-01	SF12
SF10-015	SF13
SF1001	SF11
SF1002	SF12
SF1003	SF13
SF1004	SF14
SF11	SF11
SF12	SF12
SF13	SF13
SF14	SF14
SF20-005	SF21
SF20-01	SF22
SF20-015	SF23
SF20-02	SF24
SF21	SF21
SF22	SF22
SF23	SF23
SF24	SF24
SF30-005	SF31
SF30-01	SF32
SF30-015	SF33
SF30-02	SF34
SF31	SF31
SF32	SF32
SF33	SF33
SF34	SF34
SF50-005	SF61
SF50-01	SF62
SF50-015	SF63
SF50-02	SF64
SF60-005	SF61
SF60-01	SF62
SF60-015	SF63
SF60-02	SF64
SF61	SF61
SF62	SF62
SF63	SF63
SF64	SF64
SGI5001	UF4001
SGI5002	UF4002
SGI5003	UF4003
SGI5004	UF4004
SGL41-20	DL5817

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
SGL41-30	DL5818
SGL41-40	DL5819
SI851	FR302
SI852	FR303
SI854	FR304
SI856	FR305
SI910	FR301
SI911	FR302
SI912	FR303
SI914	FR304
SI916	FR305
SI917	FR306
SI918	FR307
SK102	1N5817
SK103	1N5818
SK104	1N5819
SK105	SR105
SK106	SR106
SK110	SK110
SK12	SK12
SK13	SK13
SK14	SK14
SK15	SK15
SK16	SK16
SK18	SK18
SK302	1N5820
SK303	1N5821
SK304	1N5822
SK305	SR305
SK306	SR306
SK32	SK32
SK33	SK33
SK34	SK34
SK35	SK35
SK36	SK36
SM320	1N5820
SM330	1N5821
SM4001	DL4001
SM4002	DL4002
SM4003	DL4003
SM4004	DL4004
SM4005	DL4005
SM4006	DL4006
SM4007	DL4007
SM4933	DL4933
SM4934	DL4934

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
SM4935	DL4935
SM4936	DL4936
SM4937	DL4937
SM5817	DL5817
SM5818	DL5818
SM5819	DL5819
SMB4001	S1A
SMB4002	S1B
SMB4003	S1D
SMB4004	S1G
SMB4005	S1J
SMB4006	S1K
SMB4007	S1M
SMB4933	FR1A
SMB4934	FR1B
SMB4935	FR1D
SMB4936	FR1G
SMB4937	FR1J
SMB4947	FR1K
SMB4948	FR1M
SMB5817	SK12
SMB5818	SK13
SMB5819	SK14
SMBSF11	ER1A
SMBSF12	ER1B
SMBSF13	ER1C
SMBSF14	ER1D
SMBSF16	ER1G
SMBSF18	ER1J
SMBSR1010	SK110
SMBSR105	SK15
SMBSR106	SK16
SMBSR108	SK18
SR102	1N5817
SR103	1N5818
SR104	1N5819
SR105	SR105
SR106	SR106
SR302	1N5820
SR303	1N5821
SR304	1N5822
SR305	SR305
SR306	SR306
SR6001	FR601
SR6002	FR602
SR6003	FR603

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
SR6004	FR604
SR6005	FR605
SR6006	FR606
SR6007	FR607
SR850	FR301
SR851	FR302
SR852	FR303
SR853	FR304
SR854	FR305
SR855	FR306
SR856	FR307
SRA251	SRA251
SRA252	SRA252
SRA253	SRA253
SRA254	SRA254
SRA255	SRA255
SRA256	SRA256
SRA257	SRA257
SRA351	SRA351
SRA352	SRA352
SRA353	SRA353
SRA354	SRA354
SRA355	SRA355
SRA356	SRA356
SRA357	SRA357
SRP100A	1N4933
SRP100B	1N4934
SRP100D	1N4935
SRP100G	1N4936
SRP100J	1N4937
SRP100K	FR106
SRP300A	FR301
SRP300B	FR302
SRP300D	FR303
SRP300G	FR304
SRP300J	FR305
SRP300K	FR306
SRP600A	FR601
SRP600B	FR602
SRP600D	FR603
SRP600G	FR604
SRP600J	FR605
SRP600K	FR606
SS12	SS12
SS13	SS13
SS14	SS14

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
SS15	SS15
SS16	SS16
SS18	SS18
SS100	SS100
SS32	SK32
SS33	SK33
SS34	SK34
SS35	SK35
SS36	SK36
SSF11	SF11
SSF12	SF12
SSF13	SF13
SSF14	SF14
SSF21	SF21
SSF22	SF22
SSF23	SF23
SSF24	SF24
SSF31	SF31
SSF32	SF32
SSF33	SF33
SSF34	SF34
SSF51	SF61
SSF52	SF62
SSF53	SF63
SSF54	SF64
SSM4001	DL4001
SSM4002	DL4002
SSM4003	DL4003
SSM4004	DL4004
SSM4005	DL4005
SSM4006	DL4006
SSM4007	DL4007
SUF4001	UF4001
SUF4002	UF4002
SUF4003	UF4003
SUF4004	UF4004
SUF4005	UF4005
SUF4006	UF4006
SUF4007	UF4007
SUF5400	UF5400
SUF5401	UF5401
SUF5402	UF5402
SUF5403	UF5404
SUF5404	UF5404
TG24	UF5406
TG26	UF5406

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
TG4	UF4004
TG6	UF4006
TMBD6916	BAT54
TMBYV10-20/A	DL5817
TMBYV10-30	DL5818
TMBYV10-40	DL5819
TMPTA20	MMBT3904
UES1001	SF11
UES1002	SF12
UES1003	SF13
UES1004	SF14
UES1101	SF31
UES1102	SF32
UES1103	SF33
UES1104	SF34
UES1301	SF61
UES1302	SF62
UES1303	SF63
UES1304	SF64
UF10-005	UF4001
UF10-01	UF4002
UF10-02	UF4003
UF1001	UF4001
UF1002	UF4002
UF1003	UF4003
UF1004	UF4004
UF1005	UF4005
UF1006	UF4006
UF1007	UF4007
UF20-005	UF5400
UF20-01	UF5401
UF20-02	UF5402
UF30-005	UF5400
UF30-01	UF5401
UF30-02	UF5402
UF3001	UF5400
UF3002	UF5401
UF3003	UF5402
UF3004	UF5404
UF3005	UF5406
UF3006	UF5407
UF3007	UF5408
UP100	SF11
UP101	SF12
UP102	SF14
UP150	SF21

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
UP151	SF22
UP152	SF24
UP300	SF31
UP301	SF32
UP302	SF34
UP600	SF61
UP601	SF62
UP602	SF64
USD1120	1N5817
USD1130	1N5818
USD1140	1N5819
USD1150	SR105
USD1160	SR106
V105X	1N4933
V110X	1N4934
V120X	1N4935
V140X	1N4936
V160X	1N4937
V180X	FR106
V330	1N5400
V330X	FR301
V331	1N5401
V3310	1N5408
V331X	FR302
V332	1N5402
V332X	FR303
V334	1N5404
V334X	FR304
V336	1N5406
V336X	FR305
V338	1N5407
V350	1N5400
V350X	FR301
V351	1N5401
V3510	1N5408
V351X	FR302
V352	1N5402
V352X	FR303
V354	1N5404
V354X	FR304
V356	1N5406
V356X	FR305
V358	1N5407
V358X	FR306
VA15	R1500
VA15X	R1500F

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INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
VA18	R1800
VA18X	R1800F
VA20	R2000
VA20X	R2000F
VA25	R2500
VA25X	R2500F
VA30	R3000
VA30X	R3000F
VB20	R2000
VB20X	R2000F
VB25	R2500
VB25X	R2500F
VB30	R3000
VB30X	R3000F
VE08	W005M
VE108	W10M
VE18	W01M
VE28	W02M
VE48	W04M
VE68	W06M
VE88	W08M
VH048	PB605
VH1048	PB610
VH148	PB61
VH248	PB62
VH448	PB64
VH648	PB66
VH848	PB68
VHE205	SF21
VHE210	SF22
VHE215	SF23
VHE220	SF24
VHE605	SF61
VHE610	SF62
VHE615	SF63
VHE620	SF64
VHO48	PB605
VK048	MP3505
VK1048	MB2510
VK148	MB351
VK248	MB252
VK448	MB354
VK648	MB256
VK848	MB358
VL048	MB1505
VL1048	MB1510

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
VL148	MB151
VL248	MB152
VL448	MB154
VL648	MB156
VL848	MB158
VM08	DB101
VM108	DB107
VM18	DB102
VM28	DB103
VM48	DB104
VM68	DB105
VM88	DB108
VS048	PB305
VS1048	PB310
VS148	PB31
VS248	PB32
VS448	PB34
VS648	PB36
VS848	PB38
VSK120	1N5817
VSK130	1N5818
VSK140	1N5819
VSK150	SR105
VSK160	SR106
VSK320	1N5820
VSK330	1N5821
VSK340	1N5822
VSK350	SR305
VSK360	SR306
VSK520	SR502
VSK530	SR503
VSK540	SR504
VSK550	SR505
VSK560	SR506
VSK835	SD840
VSK840	SD840
VSK845	SD845
W005	W005M
W005M	W005M
W01	W01M
W01M	W01M
W02	W02M
W02M	W02M
W04	W04M
W04M	W04M
W06	W06M

INDUSTRY PART NUMBER	CLOSEST MICROSEMI CHATSWORTH EQUIVALENT
W06M	W06M
W08	W08M
W08M	W08M
W10	W10M
W10M	W10M
WAB005	6A05
WAB010	6A1
WAB020	6A2
WAB040	6A4
WAB060	6A6
WAB080	6A8
WAB100	6A10
WB100	W005M
WB101	W01M
WB102	W02M
WB104	W04M
WB108	W08M
WB110	W10M
WB150	W005M
WB151	W01M
WB1510	W10M
WB152	W02M
WB154	W04M
WB156	W06M
WB158	W08M
WB406	W06M
WL005	W005M
WL01	W01M
WL02	W02M
WL04	W04M
WL06	W06M
WL08	W08M
WL10	W10M
YAB005	6A05
YAB010	6A1
YAB020	6A2
YAB040	6A4
YAB060	6A6
YAB080	6A8
YAB100	6A10
ZBAT54	BAT54
ZBAT54A	BAT54A
ZBAT54C	BAT54C
ZBAT54S	BAT54S

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Section 3

Electrical Characteristics
Selection Guide

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Super Fast Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_L*	Maximum Forward Voltage @ 25°C T_L*		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_L*		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS
1.0 AMPERE SUPER FAST/DO-41								
UF4001	50	1.0	55	30	10	1.0	1.0	50
UF4002	100	1.0	55	30	10	1.0	1.0	50
UF4003	200	1.0	55	30	10	1.0	1.0	50
UF4004	400	1.0	55	30	10	1.0	1.0	50
UF4005	600	1.0	55	30	10	1.0	1.4	75
UF4006	800	1.0	55	30	10	1.0	1.4	75
UF4007	1000	1.0	55	30	10	1.0	1.4	75
3.0 AMPERE SUPER FAST/DO-201AD								
UF5400	50	3.0	55	150	10	3.0	1.0	50
UF5401	100	3.0	55	150	10	3.0	1.0	50
UF5402	200	3.0	55	150	10	3.0	1.0	50
UF5404	400	3.0	55	150	10	3.0	1.0	50
UF5406	600	3.0	55	150	10	3.0	1.4	75
UF5407	800	3.0	55	150	10	3.0	1.4	75
UF5408	1000	3.0	55	150	10	3.0	1.4	75

*TL = Lead Temp. @ 3/8" From Body

Super Fast Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_L*	Maximum Forward Voltage @ 25°C T_L*		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_L*		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS
1.0 AMPERE SUPER FAST GLASS PASSIVATED/DO-41								
SF11	50	1.0	55	30	5.0	1.0	.975	35
SF12	100	1.0	55	30	5.0	1.0	.975	35
SF13	150	1.0	55	30	5.0	1.0	.975	35
SF14	200	1.0	55	30	5.0	1.0	.975	35
SF16	400	1.0	55	30	5.0	1.0	1.25	50
SF18	600	1.0	55	30	5.0	1.0	1.25	50
MUR105	50	1.0	130	35	2.0	1.0	.875	25
MUR110	100	1.0	130	35	2.0	1.0	.875	25
MUR115	150	1.0	130	35	2.0	1.0	.875	25
MUR120	200	1.0	120	35	5.0	1.0	1.25	50
MUR140	400	1.0	120	35	5.0	1.0	1.25	50
MUR160	600	1.0	120	35	5.0	1.0	1.25	50
MUR180	800	1.0	95	35	10	1.0	1.75	75
MUR1100	1000	1.0	95	35	10	1.0	1.75	75
UF4001GP	50	1.0	55	30	10	1.0	1.0	50
UF4002GP	100	1.0	55	30	10	1.0	1.0	50
UF4003GP	200	1.0	55	30	10	1.0	1.0	50
UF4004GP	400	1.0	55	30	10	1.0	1.0	50
UF4005GP	600	1.0	55	30	10	1.0	1.4	75
UF4006GP	800	1.0	55	30	10	1.0	1.4	75
UF4007GP	1000	1.0	55	30	10	1.0	1.4	75
2.0 AMPERE SUPER FAST GLASS PASSIVATED/DO-15								
SF21	50	2.0	55	50	5.0	2.0	.875	35
SF22	100	2.0	55	50	5.0	2.0	.875	35
SF23	150	2.0	55	50	5.0	2.0	.875	35
SF24	200	2.0	55	50	5.0	2.0	.875	35
SF26	400	2.0	55	50	5.0	2.0	.875	35
SF28	600	2.0	55	50	5.0	2.0	.875	35

*TL = Lead Temp. @ 3/8" From Body

Super Fast Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_L*	Maximum Forward Voltage @ 25°C T_L*		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_L*		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS
3.0 AMPERE SUPER FAST GLASS PASSIVATED/DO-201AD								
UF5400GP	50	3.0	55	150	10	3.0	1.0	50
UF5401GP	100	3.0	55	150	10	3.0	1.0	50
UF5402GP	200	3.0	55	150	10	3.0	1.0	50
UF5404GP	400	3.0	55	150	10	3.0	1.0	50
UF5406GP	600	3.0	55	150	10	3.0	1.4	75
UF5407GP	800	3.0	55	150	10	3.0	1.4	75
UF5408GP	1000	3.0	55	150	10	3.0	1.4	75
4.0 AMPERE SUPER FAST GLASS PASSIVATED/DO-201AD								
MUR405	50	4.0	80	125	5.0	4.0	.89	25
MUR410	100	4.0	80	125	5.0	4.0	.89	25
MUR415	150	4.0	80	125	5.0	4.0	.89	25
MUR420	200	4.0	40	70	10.0	4.0	1.28	50
MUR440	400	4.0	40	70	10.0	4.0	1.28	50
MUR460	600	4.0	40	70	10.0	4.0	1.28	50
MUR480	800	4.0	35	70	25.0	4.0	1.85	75
MUR4100	1000	4.0	35	70	25.0	4.0	1.85	75
6.0 AMPERE SUPER FAST GLASS PASSIVATED/DO-201AD								
SF61	50	6.0	55	150	10	6.0	1.0	35
SF62	100	6.0	55	150	10	6.0	1.0	35
SF63	150	6.0	55	150	10	6.0	1.0	35
SF64	200	6.0	55	150	10	6.0	1.0	35
SF66	400	6.0	55	150	10	6.0	1.0	50
SF68	600	6.0	55	150	10	6.0	1.0	50

*TL = Lead Temp. @ 3/8" From Body

Fast Recovery Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_L*	Maximum Forward Voltage @ 25°C T_L*		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_L*		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS
1.0 AMPERE FAST RECOVERY/DO-41								
FR101	50	1.0	75	30	5.0	1.0	1.3	150
FR102	100	1.0	75	30	5.0	1.0	1.3	150
FR103	200	1.0	75	30	5.0	1.0	1.3	150
FR104	400	1.0	75	30	5.0	1.0	1.3	150
FR105	600	1.0	75	30	5.0	1.0	1.3	250
FR106	800	1.0	75	30	5.0	1.0	1.3	500
FR107	1000	1.0	75	30	5.0	1.0	1.3	500
1N4933	50	1.0	75	30	5.0	1.0	1.2	*200
1N4934	100	1.0	75	30	5.0	1.0	1.2	*200
1N4935	200	1.0	75	30	5.0	1.0	1.2	*200
1N4936	400	1.0	75	30	5.0	1.0	1.2	*200
1N4937	600	1.0	75	30	5.0	1.0	1.2	*200
1N4942	200	1.0	75	30	5.0	1.0	1.3	150
1N4944	400	1.0	75	30	5.0	1.0	1.3	150
1N4946	600	1.0	75	30	5.0	1.0	1.3	250
1N4947	800	1.0	75	30	5.0	1.0	1.3	250
1N4948	1000	1.0	75	30	5.0	1.0	1.3	500

*TL = Lead Temp. @ 3/8" From Body

*t_{rr} Test Condition: $I_F = 1A$, $V_R = 30V$

Fast Recovery Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_L*	Maximum Forward Voltage @ 25°C T_L*		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_L*		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS

*TL = Lead Temp. @ 3/8" From Body

1.5 AMPERE FAST RECOVERY/DO-15

FR151	50	1.5	75	60	5.0	1.5	1.3	150
FR152	100	1.5	75	60	5.0	1.5	1.3	150
FR153	200	1.5	75	60	5.0	1.5	1.3	150
FR154	400	1.5	75	60	5.0	1.5	1.3	150
FR155	600	1.5	75	60	5.0	1.5	1.3	250
FR156	800	1.5	75	60	5.0	1.5	1.3	500
FR157	1000	1.5	75	60	5.0	1.5	1.3	500

2.0 AMPERE FAST RECOVERY/DO-15

FR201	50	2.0	75	70	5.0	2.0	1.3	150
FR202	100	2.0	75	70	5.0	2.0	1.3	150
FR203	200	2.0	75	70	5.0	2.0	1.3	150
FR204	400	2.0	75	70	5.0	2.0	1.3	150
FR205	600	2.0	75	70	5.0	2.0	1.3	250
FR206	800	2.0	75	70	5.0	2.0	1.3	500
FR207	1000	2.0	75	70	5.0	2.0	1.3	500

3.0 AMPERE FAST RECOVERY/DO-201AD

FR301	50	3.0	75	150	10	3.0	1.3	150
FR302	100	3.0	75	150	10	3.0	1.3	150
FR303	200	3.0	75	150	10	3.0	1.3	150
FR304	400	3.0	75	150	10	3.0	1.3	150
FR305	600	3.0	75	150	10	3.0	1.3	250
FR306	800	3.0	75	150	10	3.0	1.3	500
FR307	1000	3.0	75	150	10	3.0	1.3	500

6.0 AMPERE FAST RECOVERY/R6

FR601	50	6.0	75	300	10	6.0	1.3	150
FR602	100	6.0	75	300	10	6.0	1.3	150
FR603	200	6.0	75	300	10	6.0	1.3	150
FR604	400	6.0	75	300	10	6.0	1.3	150
FR605	600	6.0	75	300	10	6.0	1.3	250
FR606	800	6.0	75	300	10	6.0	1.3	500
FR607	1000	6.0	75	300	10	6.0	1.3	500

Silicon Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O@ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}

1.0 AMPERE /A-405*

RL101	50	1.0	75	30	5.0	1.0	1.1
RL102	100	1.0	75	30	5.0	1.0	1.1
RL103	200	1.0	75	30	5.0	1.0	1.1
RL104	400	1.0	75	30	5.0	1.0	1.1
RL105	600	1.0	75	30	5.0	1.0	1.1
RL106	800	1.0	75	30	5.0	1.0	1.1
RL107	1000	1.0	75	30	5.0	1.0	1.1

* Recommended For Radial Bend Only

Silicon Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O@ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}
1.0 AMPERE /DO-41							
1N4001	50	1.0	75	30	5.0	1.0	1.1
1N4002	100	1.0	75	30	5.0	1.0	1.1
1N4003	200	1.0	75	30	5.0	1.0	1.1
1N4004	400	1.0	75	30	5.0	1.0	1.1
1N4005	600	1.0	75	30	5.0	1.0	1.1
1N4006	800	1.0	75	30	5.0	1.0	1.1
1N4007	1000	1.0	75	30	5.0	1.0	1.1
1.5 AMPERE /DO-15							
1N5391	50	1.5	50	50	5.0	1.5	1.0
1N5392	100	1.5	50	50	5.0	1.5	1.0
1N5393	200	1.5	50	50	5.0	1.5	1.0
1N5395	400	1.5	50	50	5.0	1.5	1.0
1N5397	600	1.5	50	50	5.0	1.5	1.0
1N5398	800	1.5	50	50	5.0	1.5	1.0
1N5399	1000	1.5	50	50	5.0	1.5	1.0
2.0 AMPERE /DO-15							
RL201	50	2.0	50	70	5.0	2.0	1.0
RL202	100	2.0	50	70	5.0	2.0	1.0
RL203	200	2.0	50	70	5.0	2.0	1.0
RL204	400	2.0	50	70	5.0	2.0	1.0
RL205	600	2.0	50	70	5.0	2.0	1.0
RL206	800	2.0	50	70	5.0	2.0	1.0
RL207	1000	2.0	50	70	5.0	2.0	1.0
2.5 AMPERE/R3							
RL251	50	2.5	50	150	5.0	2.5	1.0
RL252	100	2.5	50	150	5.0	2.5	1.0
RL253	200	2.5	50	150	5.0	2.5	1.0
RL254	400	2.5	50	150	5.0	2.5	1.0
RL255	600	2.5	50	150	5.0	2.5	1.0
RL256	800	2.5	50	150	5.0	2.5	1.0
RL257	1000	2.5	50	150	5.0	2.5	1.0
3.0 AMPERE/DO-201AD							
1N5400	50	3.0	75	200	5.0	3.0	0.95
1N5401	100	3.0	75	200	5.0	3.0	0.95
1N5402	200	3.0	75	200	5.0	3.0	0.95
1N5404	400	3.0	75	200	5.0	3.0	0.95
1N5406	600	3.0	75	200	5.0	3.0	0.95
1N5407	800	3.0	75	200	5.0	3.0	0.95
1N5408	1000	3.0	75	200	5.0	3.0	0.95
6.0 AMPERE/R6							
6A05	50	6.0	75	400	10	6.0	0.9
6A1	100	6.0	75	400	10	6.0	0.9
6A2	200	6.0	75	400	10	6.0	0.9
5A4	400	6.0	75	400	10	6.0	0.9
6A6	600	6.0	75	400	10	6.0	0.9
6A8	800	6.0	75	400	10	6.0	0.9
6A10	1000	6.0	75	400	10	6.0	0.9

Glass Passivated Bridge Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimpose d	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O@ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}
1.0 AMPERE GLASS PASSIVATED/DB-1							
DB101	50	1.0	40	50	10	1.0	1.1
DB102	100	1.0	40	50	10	1.0	1.1
DB103	200	1.0	40	50	10	1.0	1.1
DB104	400	1.0	40	50	10	1.0	1.1
DB105	600	1.0	40	50	10	1.0	1.1
DB106	800	1.0	40	50	10	1.0	1.1
DB107	1000	1.0	40	50	10	1.0	1.1

Surface Mount Glass Passivated Bridge Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimpose d	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O@ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}
1.0 AMPERE GLASS PASSIVATED/SDB-1							
SDB101	50	1.0	40	50	10	1.0	1.1
SDB102	100	1.0	40	50	10	1.0	1.1
SDB103	200	1.0	40	50	10	1.0	1.1
SDB104	400	1.0	40	50	10	1.0	1.1
SDB105	600	1.0	40	50	10	1.0	1.1
SDB106	800	1.0	40	50	10	1.0	1.1
SDB107	1000	1.0	40	50	10	1.0	1.1

Bridge Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -55°C TO 150°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimpose d	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O@ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}
1.5 AMPERE/RB-15							
RB151	50	1.5	50	50	10	1.0	1.0
RB152	100	1.5	50	50	10	1.0	1.0
RB153	200	1.5	50	50	10	1.0	1.0
RB154	400	1.5	50	50	10	1.0	1.0
RB155	600	1.5	50	50	10	1.0	1.0
RB156	800	1.5	50	50	10	1.0	1.0
RB157	1000	1.5	50	50	10	1.0	1.0
1.5 AMPERE/WOM							
W005M	50	1.5	50	50	10	1.0	1.0
W01M	100	1.5	50	50	10	1.0	1.0
W02M	200	1.5	50	50	10	1.0	1.0
W04M	400	1.5	50	50	10	1.0	1.0
W06M	600	1.5	50	50	10	1.0	1.0
W08M	800	1.5	50	50	10	1.0	1.0
W10M	1000	1.5	50	50	10	1.0	1.0

Bridge Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -55°C TO 150°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O @ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}
2.0 AMPERE/WOL							
2W005	50	2.0	50	50	10	1.0	1.0
2W01	100	2.0	50	50	10	1.0	1.0
2W02	200	2.0	50	50	10	1.0	1.0
2W04	400	2.0	50	50	10	1.0	1.0
2W06	600	2.0	50	50	10	1.0	1.0
2W08	800	2.0	50	50	10	1.0	1.0
2W10	1000	2.0	50	50	10	1.0	1.0
2.0 AMPERE/BR-8D							
BR805DL	50	2.0	75	50	10	1.0	1.0
BR81DL	100	2.0	75	50	10	1.0	1.0
BR82DL	200	2.0	75	50	10	1.0	1.0
BR84DL	400	2.0	75	50	10	1.0	1.0
BR86DL	600	2.0	75	50	10	1.0	1.0
BR88DL	800	2.0	75	50	10	1.0	1.0
BR810DL	1000	2.0	75	50	10	1.0	1.0
3.0 AMPERE/PB-3							
PB305	50	3.0	*75	50	10	1.5	1.0
PB31	100	3.0	*75	50	10	1.5	1.0
PB32	200	3.0	*75	50	10	1.5	1.0
PB34	400	3.0	*75	50	10	1.5	1.0
PB36	600	3.0	*75	50	10	1.5	1.0
PB38	800	3.0	*75	50	10	1.5	1.0
PB310	1000	3.0	*75	50	10	1.5	1.0
4.0 AMPERE/RS-4L							
RS401L	50	4.0	50	200	10	3.0	1.0
RS402L	100	4.0	50	200	10	3.0	1.0
RS403L	200	4.0	50	200	10	3.0	1.0
RS404L	400	4.0	50	200	10	3.0	1.0
RS405L	600	4.0	50	200	10	3.0	1.0
RS406L	800	4.0	50	200	10	3.0	1.0
RS407L	1000	4.0	50	200	10	3.0	1.0
6.0 AMPERE/RS-6							
RS601	50	6.0	50	200	10	3.0	1.0
RS602	100	6.0	50	200	10	3.0	1.0
RS603	200	6.0	50	200	10	3.0	1.0
RS604	400	6.0	50	200	10	3.0	1.0
RS605	600	6.0	50	200	10	3.0	1.0
RS606	800	6.0	50	200	10	3.0	1.0
RS607	1000	6.0	50	200	10	3.0	1.0
6.0 AMPERE/PB-6							
PB605	50	6.0	50	200	10	3.0	1.1
PB61	100	6.0	50	200	10	3.0	1.1
PB62	200	6.0	50	200	10	3.0	1.1
PB64	400	6.0	50	200	10	3.0	1.1
PB66	600	6.0	50	200	10	3.0	1.1
PB68	800	6.0	50	200	10	3.0	1.1
PB610	1000	6.0	50	200	10	3.0	1.1

*Heat Sink Temperature

Bridge Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -55°C TO 150°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O @ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}

8.0 AMPERE/BR-6 (CERAMIC CASE)

Type	PRV (V_{PK})	I_O (A_{AV})	T_A (°C)	I_{FSM} (A_{PK})	I_R (µAdc)	I_{FM} (A_{PK})	V_{FM} (V_{PK})
MB805	50	8.0	75	125	5.0	4.0	1.1
MB81	100	8.0	75	125	5.0	4.0	1.1
MB82	200	8.0	75	125	5.0	4.0	1.1
MB84	400	8.0	75	125	5.0	4.0	1.1
MB86	600	8.0	75	125	5.0	4.0	1.1
MB88	800	8.0	75	125	5.0	4.0	1.1
MB810	1000	8.0	75	125	5.0	4.0	1.1

10 AMPERE/BR-6 (CERAMIC CASE)

Type	PRV (V_{PK})	I_O (A_{AV})	T_A (°C)	I_{FSM} (A_{PK})	I_R (µAdc)	I_{FM} (A_{PK})	V_{FM} (V_{PK})
MB1005	50	10	75	150	5.0	5.0	1.1
MB101	100	10	75	150	5.0	5.0	1.1
MB102	200	10	75	150	5.0	5.0	1.1
MB104	400	10	75	150	5.0	5.0	1.1
MB106	600	10	75	150	5.0	5.0	1.1
MB108	800	10	75	150	5.0	5.0	1.1
MB1010	1000	10	75	150	5.0	5.0	1.1

15 AMPERE/MB-35(W) (HIGH CONDUCTIVITY METAL CASE)

Type	PRV (V_{PK})	I_O (A_{AV})	T_A (°C)	I_{FSM} (A_{PK})	I_R (µAdc)	I_{FM} (A_{PK})	V_{FM} (V_{PK})
MB1505	50	15	55	300	10	7.5	1.1
MB151	100	15	55	300	10	7.5	1.1
MB152	200	15	55	300	10	7.5	1.1
MB154	400	15	55	300	10	7.5	1.1
MB156	600	15	55	300	10	7.5	1.1
MB158	800	15	55	300	10	7.5	1.1
MB1010	1000	15	55	300	10	7.5	1.1

NOTE: Suffix "W" Denotes Wire Leads

15 AMPERE/MP-50(W) (METAL BOTTOM PLASTIC CASE)

Type	PRV (V_{PK})	I_O (A_{AV})	T_A (°C)	I_{FSM} (A_{PK})	I_R (µAdc)	I_{FM} (A_{PK})	V_{FM} (V_{PK})
MP1505	50	15	55	300	10	7.5	1.1
MP151	100	15	55	300	10	7.5	1.1
MP152	200	15	55	300	10	7.5	1.1
MP154	400	15	55	300	10	7.5	1.1
MP156	600	15	55	300	10	7.5	1.1
MP158	800	15	55	300	10	7.5	1.1
MP1010	1000	15	55	300	10	7.5	1.1

NOTE: Suffix "W" Denotes Wire Leads

25 AMPERE/MB-35(W) (HIGH CONDUCTIVITY METAL CASE)

Type	PRV (V_{PK})	I_O (A_{AV})	T_A (°C)	I_{FSM} (A_{PK})	I_R (µAdc)	I_{FM} (A_{PK})	V_{FM} (V_{PK})
MB2505	50	25	55	300	10	12.5	1.1
MB251	100	25	55	300	10	12.5	1.1
MB252	200	25	55	300	10	12.5	1.1
MB254	400	25	55	300	10	12.5	1.1
MB256	600	25	55	300	10	12.5	1.1
MB258	800	25	55	300	10	12.5	1.1
MB2510	1000	25	55	300	10	12.5	1.1

NOTE: Suffix "W" Denotes Wire Leads

25 AMPERE/MP-50(W) (METAL BOTTOM PLASTIC CASE)

Type	PRV (V_{PK})	I_O (A_{AV})	T_A (°C)	I_{FSM} (A_{PK})	I_R (µAdc)	I_{FM} (A_{PK})	V_{FM} (V_{PK})
MP2505	50	25	55	300	10	12.5	1.1
MP251	100	25	55	300	10	12.5	1.1
MP252	200	25	55	300	10	12.5	1.1
MP254	400	25	55	300	10	12.5	1.1
MP256	600	25	55	300	10	12.5	1.1
MP258	800	25	55	300	10	12.5	1.1
MP2510	1000	25	55	300	10	12.5	1.1

NOTE: Suffix "W" Denotes Wire Leads

Bridge Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -55°C TO 150°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O @ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}

35 AMPERE/MB-35(W) (HIGH CONDUCTIVITY METAL CASE)

MB3505	50	35	55	400	10	17.5	1.2
MB351	100	35	55	400	10	17.5	1.2
MB352	200	35	55	400	10	17.5	1.2
MB354	400	35	55	400	10	17.5	1.2
MB356	600	35	55	400	10	17.5	1.2
MB358	800	35	55	400	10	17.5	1.2
MB3510	1000	35	55	400	10	17.5	1.2

NOTE: Suffix "W" Denotes Wire Leads

35 AMPERE/MP-50(W) (METAL BOTTOM PLASTIC CASE)

MP3505	50	35	55	400	10	17.5	1.2
MP351	100	35	55	400	10	17.5	1.2
MP352	200	35	55	400	10	17.5	1.2
MP354	400	35	55	400	10	17.5	1.2
MP356	600	35	55	400	10	17.5	1.2
MP358	800	35	55	400	10	17.5	1.2
MP3510	1000	35	55	400	10	17.5	1.2

NOTE: Suffix "W" Denotes Wire Leads

40 AMPERE/MP-50(W) (METAL BOTTOM PLASTIC CASE)

MP4005	50	40	55	400	10	20	1.2
MP401	100	40	55	400	10	20	1.2
MP402	200	40	55	400	10	20	1.2
MP404	400	40	55	400	10	20	1.2
MP406	600	40	55	400	10	20	1.2
MP408	800	40	55	400	10	20	1.2
MP4010	1000	40	55	400	10	20	1.2

NOTE: Suffix "W" Denotes Wire Leads

50 AMPERE/MP-50(W) (METAL BOTTOM PLASTIC CASE)

MP5005	50	50	55	400	10	25	1.2
MP501	100	50	55	400	10	25	1.2
MP502	200	50	55	400	10	25	1.2
MP504	400	50	55	400	10	25	1.2
MP506	600	50	55	400	10	25	1.2
MP508	800	50	55	400	10	25	1.2
MP5010	1000	50	55	400	10	25	1.2

NOTE: Suffix "W" Denotes Wire Leads

High Voltage Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 150°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_L*	Maximum Forward Voltage @ 25°C T_L*		Maximum Reverse Recovery Time
	V_{RWM}	I_O @ T_L*		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	µA	°C	A	µA	A	V	nS

*TL = Lead Temp. @ 3/8" From Body

500 MICROAMPERE/DO-41/DO-15

R1200	1200	500	50	30	5.0	0.5	1.6	---
R1500	1500	500	50	30	5.0	0.5	1.6	---
R1800	1800	500	50	30	5.0	0.5	1.6	---
R2000	2000	500	50	30	5.0	0.5	2.6	---
R2500*	2500	200	50	30	5.0	0.2	2.6	---
R3000*	3000	200	50	30	5.0	0.2	2.6	---

*DO-15 Package Only

NOTE:VRWM>3000V Is Available As Special Order

High Voltage Fast Recovery Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 150°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_L*	Maximum Forward Voltage @ 25°C T_L*		Maximum Reverse Recovery Time
	V_{RWM}	I_O @ T_L*		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	µA	°C	A	µA	A	V	nS

*TL = Lead Temp. @ 3/8" From Body

500MICROAMPERE FAST RECOVERY/DO-41/D0-15

R1200F	1200	500	50	30	5.0	0.5	2.0	500
R1500F	1500	500	50	30	5.0	0.5	2.0	500
R1800F	1800	500	50	30	5.0	0.5	2.0	500
R2000F	2000	500	50	30	5.0	0.5	3.0	500
R2500F*	2500	200	50	30	5.0	0.2	3.0	500
R3000F*	3000	200	50	30	5.0	0.2	3.0	500

*DO-15 Package Only NOTE:VRWM>3000V Is Available As Special Order

High Speed Switching Diodes

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Peak Reverse Voltage	Maximum Reverse Current @ 25°C		Maximum Forward Voltage Drop Current		Capacitance VR = VF =0	Reverse Recovery Time	Maximum Power Dissipation @ T_A=25°C
	PRV	IR @ VR		V_F @ I_F		C Max.	t_{rr} Max.	
	VPK	µA	V	V	mA	pF	nS	mW

250mW SWITCHING DIODE/DO-35

1N914	100	5	75	1.0	10	4.0	4.0	250
1N914A	100	5	75	1.0	20	4.0	4.0	250
1N914B	100	5	75	1.0	100	4.0	4.0	250

500mW SWITCHING DIODE/DO-35

1N4148	100	5	75	1.0	10	4.0	4.0	500
1N4151	75	.05	50	1.0	50	2.0	2.0	500
1N4154	35	.1	25	1.0	30	4.0	2.0	500
1N4448	100	5	75	1.0	100	4.0	4.0	500
1N4454	75	.1	50	1.0	10	2.0	4.0	500

Schottky Barrier Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 150°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O @ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	mAdc	A_{PK}	V_{PK}

1.0 AMPERE SCHOTTKY/DO-41

1N5817	20	1.0	90	25	1.0	1.0	.45
1N5818	30	1.0	90	25	1.0	1.0	.55
1N5819	40	1.0	90	25	1.0	1.0	.60
SR105	50	1.0	100	25	1.0	1.0	.72
SR106	60	1.0	100	25	1.0	1.0	.72
SR108	80	1.0	100	25	1.0	1.0	.80
SR1010	100	1.0	100	25	1.0	1.0	.80

Schottky Barrier Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 150°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O @ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	mAdc	A_{PK}	V_{PK}
3.0 AMPERE SCHOTTKY/DO-201AD							
1N5820	20	3.0	95	80	2.0	3.0	.475
1N5821	30	3.0	95	80	2.0	3.0	.500
1N5822	40	3.0	95	80	2.0	3.0	.525
SR305	50	3.0	100	150	1.0	3.0	.65
SR306	60	3.0	100	150	1.0	3.0	.65
SR308	80	3.0	100	150	1.0	3.0	.80
SR3010	100	3.0	100	150	1.0	3.0	.80
5.0 AMPERE SCHOTTKY/DO-201AD							
SR502	20	5.0	90	250	2.0	5.0	.55
SR503	30	5.0	90	250	2.0	5.0	.55
SR504	40	5.0	90	250	1.0	5.0	.55
SR505	50	5.0	100	250	1.0	5.0	.65
SR506	60	5.0	100	250	1.0	5.0	.65
SR508	80	5.0	100	250	1.0	5.0	.75
SR5010	100	5.0	100	250	1.0	5.0	.75
8.0 AMPERE SCHOTTKY/DO-201AD							
SD820	20	8.0	92	400	1.0	8.0	.62
SD830	30	8.0	92	400	1.0	8.0	.62
SD840	40	8.0	92	400	1.0	8.0	.62
SD845	45	8.0	92	400	1.0	8.0	.62
SD850	50	8.0	92	400	1.0	8.0	.62
SD860	60	8.0	92	400	1.0	8.0	.62
SD880	80	8.0	92	400	1.0	8.0	.75
SD8100	100	8.0	92	400	1.0	8.0	.75

Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O @ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}
1.0 AMPERE GLASS PASSIVATED/DO-41							
1N4001GP	50	1.0	75	30	5.0	1.0	1.1
1N4002GP	100	1.0	75	30	5.0	1.0	1.1
1N4003GP	200	1.0	75	30	5.0	1.0	1.1
1N4004GP	400	1.0	75	30	5.0	1.0	1.1
1N4005GP	600	1.0	75	30	5.0	1.0	1.1
1N4006GP	800	1.0	75	30	5.0	1.0	1.1
1N4007GP	1000	1.0	75	30	5.0	1.0	1.1
3.0 AMPERE GLASS PASSIVATED/DO-201AD							
1N5400GP	50	3.0	55	125	5.0	3.0	1.1
1N5401GP	100	3.0	55	125	5.0	3.0	1.1
1N5402GP	200	3.0	55	125	5.0	3.0	1.1
1N5404GP	400	3.0	55	125	5.0	3.0	1.1
1N5406GP	600	3.0	55	125	5.0	3.0	1.1
1N5407GP	800	3.0	55	125	5.0	3.0	1.1
1N5408GP	1000	3.0	55	125	5.0	3.0	1.1

Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ PRV @ 25°C T_A	Maximum Forward Voltage @ 25°C T_A	
	PRV	I_O@ T_A		I_{FSM}	I_R	I_{FM}	V_{FM}
	V_{PK}	A_{AV}	°C	A_{PK}	µAdc	A_{PK}	V_{PK}
6.0 AMPERE GLASS PASSIVATED/R-6							
DR750	50	6.0	75	250	5.0	6.0	1.0
DR751	100	6.0	75	250	5.0	6.0	1.0
DR752	200	6.0	75	250	5.0	6.0	1.0
DR754	400	6.0	75	250	5.0	6.0	1.0
DR756	600	6.0	75	250	5.0	6.0	1.0
DR758	800	6.0	75	250	5.0	6.0	1.0
DR7510	1000	6.0	75	250	5.0	6.0	1.0

Fast Recovery Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_L*	Maximum Forward Voltage @ 25°C T_L*		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_L*		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS
1.0 AMPERE FAST RECOVERY GLASS PASSIVATED/DO-41								
FR101GP	50	1.0	55	30	5.0	1.0	1.3	150
FR102GP	100	1.0	55	30	5.0	1.0	1.3	150
FR103GP	200	1.0	55	30	5.0	1.0	1.3	150
FR104GP	400	1.0	55	30	5.0	1.0	1.3	150
FR105GP	600	1.0	55	30	5.0	1.0	1.3	250
FR106GP	800	1.0	55	30	5.0	1.0	1.3	250
FR107GP	1000	1.0	55	30	5.0	1.0	1.3	500
1N4933GP	50	1.0	75	30	5.0	1.0	1.2	*200
1N4934GP	100	1.0	75	30	5.0	1.0	1.2	*200
1N4935GP	200	1.0	75	30	5.0	1.0	1.2	*200
1N4936GP	400	1.0	75	30	5.0	1.0	1.2	*200
1N4937GP	600	1.0	75	30	5.0	1.0	1.2	*200
1N4942GP	200	1.0	55	30	5.0	1.0	1.3	150
1N4944GP	400	1.0	55	30	5.0	1.0	1.3	150
1N4946GP	600	1.0	55	30	5.0	1.0	1.3	250
1N4947GP	800	1.0	55	30	5.0	1.0	1.3	250
1N4948GP	1000	1.0	55	30	5.0	1.0	1.3	500
3.0 AMPERE FAST RECOVERY GLASS PASSIVATED/DO-201AD								
FR301GP	50	3.0	75	150	5.0	3.0	1.3	150
FR302GP	100	3.0	75	150	5.0	3.0	1.3	150
FR303GP	200	3.0	75	150	5.0	3.0	1.3	150
FR304GP	400	3.0	75	150	5.0	3.0	1.3	150
FR305GP	600	3.0	75	150	5.0	3.0	1.3	250
FR306GP	800	3.0	75	150	5.0	3.0	1.3	250
FR307GP	1000	3.0	75	150	5.0	3.0	1.3	500
6.0 AMPERE FAST RECOVERY GLASS PASSIVATED/R-6								
FR601GP	50	6.0	55	200	5.0	6.0	1.3	150
FR602GP	100	6.0	55	200	5.0	6.0	1.3	150
FR603GP	200	6.0	55	200	5.0	6.0	1.3	150
FR604GP	400	6.0	55	200	5.0	6.0	1.3	150
FR605GP	600	6.0	55	200	5.0	6.0	1.3	250
FR606GP	800	6.0	55	200	5.0	6.0	1.3	250
FR607GP	1000	6.0	55	200	5.0	6.0	1.3	500

*TL = Lead Temp. @ 3/8" From Body

*t_{rr} Test Condition: I_F = 1.0A, V_R = 30V

Surface Mount Schottky Barrier Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_C	Maximum Forward Voltage @ 25°C T_C	
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}
	V	A	°C	A	µA	A	V
1.0 AMPERE SCHOTTKY/MELF							
DL5817	20	1.0	90	25	1.0	1.0	.45
DL5818	30	1.0	90	25	1.0	1.0	.55
DL5819	40	1.0	90	25	1.0	1.0	.60
DLSR105	50	1.0	100	25	1.0	1.0	.72
DLSR106	60	1.0	100	25	1.0	1.0	.72
DLSR108	80	1.0	100	25	1.0	1.0	.80
DLSR1010	100	1.0	100	25	1.0	1.0	.80
1.0 AMPERE SCHOTTKY/DO-214AC							
SS12	20	1.0	90	25	1.0	1.0	.55
SS13	30	1.0	90	25	1.0	1.0	.55
SS14	40	1.0	90	25	1.0	1.0	.55
SS15	50	1.0	100	25	1.0	1.0	.70
SS16	60	1.0	100	25	1.0	1.0	.70
SS18	80	1.0	100	25	1.0	1.0	.85
SS110	100	1.0	100	25	1.0	1.0	.85
1.0 AMPERE SCHOTTKY/DO-214AA							
SK12	20	1.0	90	25	1.0	1.0	.45
SK13	30	1.0	90	25	1.0	1.0	.55
SK14	40	1.0	90	25	1.0	1.0	.60
SK15	50	1.0	100	25	1.0	1.0	.72
SK16	60	1.0	100	25	1.0	1.0	.72
SK18	80	1.0	100	25	1.0	1.0	.80
SK110	100	1.0	100	25	1.0	1.0	.80
3.0 AMPERE SCHOTTKY/DO-214AB							
SK32	20	3.0	90	80	.5	3.0	.50
SK33	30	3.0	90	80	.5	3.0	.50
SK34	40	3.0	90	80	.5	3.0	.50
SK35	50	3.0	100	80	.5	3.0	.75
SK36	60	3.0	100	80	.5	3.0	.75
SK38	80	3.0	100	80	.5	3.0	.75

Surface Mount Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_C	Maximum Forward Voltage @ 25°C T_C	
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}
	V	A	°C	A	µA	A	V
1.0 AMPERE GLASS PASSIVATED/MELF							
DL4001	50	1.0	75	30	5.0	1.0	1.1
DL4002	100	1.0	75	30	5.0	1.0	1.1
DL4003	200	1.0	75	30	5.0	1.0	1.1
DL4004	400	1.0	75	30	5.0	1.0	1.1
DL4005	600	1.0	75	30	5.0	1.0	1.1
DL4006	800	1.0	75	30	5.0	1.0	1.1
DL4007	1000	1.0	75	30	5.0	1.0	1.1

Surface Mount Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_C	Maximum Forward Voltage @ 25°C T_C	
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}
	V	A	°C	A	µA	A	V
1.0 AMPERE GLASS PASSIVATED/DO214AC							
GS1A	50	1.0	75	30	5.0	1.0	1.1
GS1B	100	1.0	75	30	5.0	1.0	1.1
GS1D	200	1.0	75	30	5.0	1.0	1.1
GS1G	400	1.0	75	30	5.0	1.0	1.1
GS1J	600	1.0	75	30	5.0	1.0	1.1
GS1K	800	1.0	75	30	5.0	1.0	1.1
GS1M	1000	1.0	75	30	5.0	1.0	1.1
1.0 AMPERE GLASS PASSIVATED/DO214AA							
S1A	50	1.0	75	30	5.0	1.0	1.1
S1B	100	1.0	75	30	5.0	1.0	1.1
S1D	200	1.0	75	30	5.0	1.0	1.1
S1G	400	1.0	75	30	5.0	1.0	1.1
S1J	600	1.0	75	30	5.0	1.0	1.1
S1K	800	1.0	75	30	5.0	1.0	1.1
S1M	1000	1.0	75	30	5.0	1.0	1.1
2.0 AMPERE GLASS PASSIVATED/DO214AA							
S2A	50	2.0	100	50	1.0	2.0	1.15
S2B	100	2.0	100	50	1.0	2.0	1.15
S2D	200	2.0	100	50	1.0	2.0	1.15
S2G	400	2.0	100	50	1.0	2.0	1.15
S2J	600	2.0	100	50	1.0	2.0	1.15
S2K	800	2.0	100	50	1.0	2.0	1.15
S2M	1000	2.0	100	50	1.0	2.0	1.15
3.0 AMPERE GLASS PASSIVATED/DO214AB							
S3A	50	3.0	95	100	5.0	3.0	1.15
S3B	100	3.0	95	100	5.0	3.0	1.15
S3D	200	3.0	95	100	5.0	3.0	1.15
S3G	400	3.0	95	100	5.0	3.0	1.15
S3J	600	3.0	95	100	5.0	3.0	1.15
S3K	800	3.0	95	100	5.0	3.0	1.15
S3M	1000	3.0	95	100	5.0	3.0	1.15

Surface Mount Fast Recovery Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_C	Maximum Forward Voltage @ 25°C T_C		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS
1.0 AMPERE FAST RECOVERY GLASS PASSIVATED/MELF								
DL4933	50	1.0	75	30	5.0	1.0	1.3	100
DL4934	100	1.0	75	30	5.0	1.0	1.3	100
DL4935	200	1.0	75	30	5.0	1.0	1.3	100
DL4936	400	1.0	75	30	5.0	1.0	1.3	100
DL4937	600	1.0	75	30	5.0	1.0	1.3	250
DLFR106	800	1.0	75	30	5.0	1.0	1.3	250
DLFR107	1000	1.0	75	30	5.0	1.0	1.3	500

Surface Mount Fast Recovery Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_C	Maximum Forward Voltage @ 25°C T_C		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS

1.0 AMPERE FAST RECOVERY GLASS PASSIVATED/DO-214AC

Type	V_{RWM} (V)	I_O (A)	T_C (°C)	I_{FSM} (A)	I_R (µA)	I_{FM} (A)	V_{FM} (V)	t_{rr} (nS)
FS1A	50	1.0	75	30	5.0	1.0	1.2	150
FS1B	100	1.0	75	30	5.0	1.0	1.2	150
FS1D	200	1.0	75	30	5.0	1.0	1.2	150
FS1G	400	1.0	75	30	5.0	1.0	1.2	150
FS1J	600	1.0	75	30	5.0	1.0	1.2	250
FS1K	800	1.0	75	30	5.0	1.0	1.3	250
FS1M	1000	1.0	75	30	5.0	1.0	1.3	500

1.0 AMPERE FAST RECOVERY GLASS PASSIVATED/DO-214AA

Type	V_{RWM} (V)	I_O (A)	T_C (°C)	I_{FSM} (A)	I_R (µA)	I_{FM} (A)	V_{FM} (V)	t_{rr} (nS)
FR1A	50	1.0	75	30	5.0	1.0	1.2	150
FR1B	100	1.0	75	30	5.0	1.0	1.2	150
FR1D	200	1.0	75	30	5.0	1.0	1.2	150
FR1G	400	1.0	75	30	5.0	1.0	1.2	150
FR1J	600	1.0	75	30	5.0	1.0	1.2	250
FR1K	800	1.0	75	30	5.0	1.0	1.3	250
FR1M	1000	1.0	75	30	5.0	1.0	1.3	500

3.0 AMPERE FAST RECOVERY GLASS PASSIVATED/DO-214AB

Type	V_{RWM} (V)	I_O (A)	T_C (°C)	I_{FSM} (A)	I_R (µA)	I_{FM} (A)	V_{FM} (V)	t_{rr} (nS)
FR3A	50	3.0	95	100	5.0	3.0	1.3	150
FR3B	100	3.0	95	100	5.0	3.0	1.3	150
FR3D	200	3.0	95	100	5.0	3.0	1.3	150
FR3G	400	3.0	95	100	5.0	3.0	1.3	150
FR3J	600	3.0	95	100	5.0	3.0	1.3	250
FR3K	800	3.0	95	100	5.0	3.0	1.3	500
FR3M	1000	3.0	95	100	5.0	3.0	1.3	500

Surface Mount Super Fast Recovery Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_C	Maximum Forward Voltage @ 25°C T_C		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS

1.0 AMPERE SUPER FAST RECOVERY GLASS PASSIVATED/MELF

Type	V_{RWM} (V)	I_O (A)	T_C (°C)	I_{FSM} (A)	I_R (µA)	I_{FM} (A)	V_{FM} (V)	t_{rr} (nS)
DLSF11	50	1.0	55	30	5.0	1.0	.975	35
DLSF12	100	1.0	55	30	5.0	1.0	.975	35
DLSF13	150	1.0	55	30	5.0	1.0	.975	35
DLSF14	200	1.0	55	30	5.0	1.0	.975	35
DLSF16	400	1.0	55	30	5.0	1.0	1.25	50
DLSF18	600	1.0	55	30	5.0	1.0	1.25	50

1.0 AMPERE SUPER FAST RECOVERY GLASS PASSIVATED/DO-214AC

Type	V_{RWM} (V)	I_O (A)	T_C (°C)	I_{FSM} (A)	I_R (µA)	I_{FM} (A)	V_{FM} (V)	t_{rr} (nS)
ES1A	50	1.0	55	30	5.0	1.0	.975	35
ES1B	100	1.0	55	30	5.0	1.0	.975	35
ES1D	200	1.0	55	30	5.0	1.0	.975	35
ES1G	400	1.0	55	30	5.0	1.0	1.25	50
ES1J	600	1.0	55	30	5.0	1.0	1.25	50
ES1K	800	1.0	55	30	5.0	1.0	1.25	50
ES1M	1000	1.0	55	30	5.0	1.0	1.25	50

Surface Mount Super Fast Recovery Glass Passivated Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Working Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_C	Maximum Forward Voltage @ 25°C T_C		Maximum Reverse Recovery Time
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}	t_{rr}
	V	A	°C	A	µA	A	V	nS
1.0 AMPERE SUPER FAST RECOVERY GLASS PASSIVATED/DO-214AA								
ER1A	50	1.0	55	30	5.0	1.0	.975	35
ER1B	100	1.0	55	30	5.0	1.0	.975	35
ER1D	200	1.0	55	30	5.0	1.0	.975	35
ER1G	400	1.0	55	30	5.0	1.0	1.25	50
ER1J	600	1.0	55	30	5.0	1.0	1.25	50
ER1K	800	1.0	55	30	5.0	1.0	1.25	50
ER1M	1000	1.0	55	30	5.0	1.0	1.25	50
3.0 AMPERE SUPER FAST RECOVERY GLASS PASSIVATED/DO-214AB								
ER3A	50	3.0	120	100	5.0	3.0	.90	35
ER3B	100	3.0	120	100	5.0	3.0	.90	35
ER3D	200	3.0	120	100	5.0	3.0	.90	35
ER3G	400	3.0	120	100	5.0	3.0	.90	35
ER3J	600	3.0	120	100	5.0	3.0	1.25	50
ER3K	800	3.0	120	100	5.0	3.0	1.25	50
ER3M	1000	3.0	120	100	5.0	3.0	1.25	50

Surface Mount Schottky Diodes

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Marking Code	Peak Reverse Voltage	Maximum Reverse Current	Maximum Forward Voltage Drop				Surge Current (1 Second Pulse)	Capacitance	Pin Identity
		PRV	I_R@V_R=25V	V_F @	I_F	V_F @	I_F	I_{FSM}	C_{TOT}	
		VPK	µA	mV	mA	mV	mA	mAdc	pF	
200mW SCHOTTKY DIODE/SOT-23										
BAT54		30	2.0	320	1.0	500	30	600	10	Fig.1
BAT54A		30	2.0	320	1.0	500	30	600	10	Fig.4
BAT54C		30	2.0	320	1.0	500	30	600	10	Fig.2
BAT54S		30	2.0	320	1.0	500	30	600	10	Fig.3

Pin Configuration - Top View

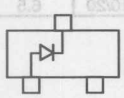


Figure 1

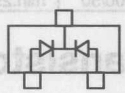


Figure 2

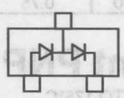


Figure 3

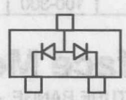


Figure 4

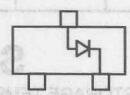


Figure 5

Microsemi

Lead Mounted NPN Transistors

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

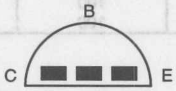
Type	V_{CEO}	h_{FE} @	V_{CE}/I_C	$V_{CE\,SAT}$ @	I_C/I_B	fT @	VCE/IC	Cob @	VCB
	V		V/mA	Max. V	mA/mA	MHz	V/mA	Max. pF	V
NPN TRANSISTORS/TO-92									
PN2222A	40	100-300	10/150	1.00	500/50	min.300	20/20	8.0	10
2N3904	40	100-300	1/10	0.30	50/5	min.300	20/10	4.0	5
2N4401	40	100-300	1/150	0.75	500/50	min.250	10/20	6.5	5

Lead Mounted PNP Transistors

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	V_{CEO}	h_{FE} @	V_{CE}/I_C	$V_{CE\,SAT}$ @	I_C/I_B	fT @	VCE/IC	Cob @	VCB
	V		V/mA	Max. V	mA/mA	MHz	V/mA	Max. pF	V
PNP TRANSISTORS/TO-92									
PN2907A	60	100-300	10/150	1.60	500/50	min.200	20/50	8	10
2N3906	40	100-300	1/10	0.40	50/5	min.250	10/10	4.5	5
2N4403	40	100-300	1/150	0.75	500/50	min.200	10/20	8.5	5

Pin Organization For TO-92
Transistors



Bottom View (Leads Up)

Surface Mount NPN Transistors

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Marking Code	V_{CEO}	h_{FE} @	V_{CE}/I_C	$V_{CE\,SAT}$ @	I_C/I_B	fT @	VCE/IC	Cob @	VCB
		V		V/mA	Max. V	mA/mA	MHz	V/mA	Max. pF	V
NPN TRANSISTORS/SOT-23										
MMBT2222A		40	100-300	10/150	1.00	500/50	min.300	20/20	8.0	10
MMBT3904		40	100-300	1/10	0.30	50/5	min.300	20/10	4.0	5
MMBT4401		40	100-300	1/150	0.75	500/50	min.250	10/20	6.5	5

Surface Mount PNP Transistors

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Marking Code	V_{CEO}	h_{FE} @	V_{CE}/I_C	$V_{CE\,SAT}$ @	I_C/I_B	fT @	VCE/IC	Cob @	VCB
		V		V/mA	Max. V	mA/mA	MHz	V/mA	Max. pF	V
PNP TRANSISTORS/SOT-23										
MMBT2907A		60	100-300	10/150	1.60	500/50	min.200	20/50	8	10
MMBT3906		40	100-300	1/10	0.40	50/5	min.250	10/10	4.5	5
MMBT4403		40	100-300	1/150	0.75	500/50	min.200	10/20	8.5	5

Pin Configuration - Top View

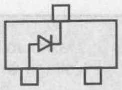


Figure 1

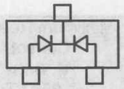


Figure 2

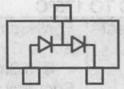


Figure 3

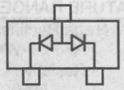


Figure 4

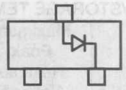


Figure 5

Surface Mount Switching Diodes

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Marking Code	Peak Reverse Voltage	Maximum Reverse Current @ 25°C		Maximum Forward Voltage Drop Current		Capacitance VR = VF =0	Reverse Recovery Time	Maximum Power Dissipation @ T_A=25°C	Pin Identity
		PRV	IR @ VR		V_F @ I_F		C Max.	t_{rr} Max.		
		VPK	µA	V	V	mA	pF	nS	mW	
350mW SWITCHING DIODES/SOT-23										
BAS16		85	1.0	75	0.855	10	2.0	6.0	350	Fig.1
BAV70		70	5.0	70	0.855	10	1.5	6.0	350	Fig.2
BAV99		70	2.5	70	0.855	10	1.5	6.0	350	Fig.3
BAW56		70	2.5	70	0.855	10	2.0	6.0	350	Fig.4
MMBD4148		100	2.5	70	1.0	10	4.0	4.0	350	Fig.1
250mW SWITCHING DIODES/MINIMELF										
DL914	---	100	5	75	1.0	10	4.0	4.0	250	---
DL914A	---	100	5	75	1.0	20	4.0	4.0	250	---
DL914B	---	100	5	75	1.0	100	4.0	4.0	250	---
500mW SWITCHING DIODES/MINIMELF										
DL4148	---	100	5	75	1.0	10	4.0	4.0	500	---
DL4151	---	75	.05	50	1.0	50	2.0	2.0	500	---
DL4154	---	35	.1	25	1.0	30	4.0	2.0	500	---
DL4448	---	100	5	75	1.0	100	4.0	4.0	500	---
DL4454	---	75	.1	50	1.0	10	2.0	4.0	500	---

Automotive Button Rectifiers

OPERATING/STORAGE TEMPERATURE RANGE: -65°C TO 175°C

Type	Maximum Peak Reverse Voltage	Average Rectified Current @ Half-Wave Resistive Load 60Hz		Forward Peak Surge Current @ 8.3mS Superimposed	Maximum Reverse Current @ V_{RWM} @ 25°C T_C	Maximum Forward Voltage @ 25°C T_C	
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}
	V	A	°C	A	µA	A	V
25 AMPERE BUTTON RECTIFIER/RA							
RA251	50	25	150	400	10	25	1.0
RA252	100	25	150	400	10	25	1.0
RA253	200	25	150	400	10	25	1.0
RA254	400	25	150	400	10	25	1.0
RA255	600	25	150	400	10	25	1.0
RA256	800	25	150	400	10	25	1.0
RA257	1000	25	150	400	10	25	1.0
25 AMPERE BUTTON RECTIFIER/SRA							
SRA251	50	25	150	400	10	25	1.0
SRA252	100	25	150	400	10	25	1.0
SRA253	200	25	150	400	10	25	1.0
SRA254	400	25	150	400	10	25	1.0
SRA255	600	25	150	400	10	25	1.0
SRA256	800	25	150	400	10	25	1.0
SRA257	1000	25	150	400	10	25	1.0

Type	Reverse Voltage	Resistive Load 60Hz		@ 8.3mS Superimposed	@ V_{RWM} @ 25°C T_C	Voltage @ 25°C T_C	
	V_{RWM}	I_O@ T_C		I_{FSM}	I_R	I_{FM}	V_{FM}
	V	A	°C	A	µA	A	V

35 AMPERE BUTTON RECTIFIER/RA

RA351	50	35	150	600	10	35	1.0
RA352	100	35	150	600	10	35	1.0
RA353	200	35	150	600	10	35	1.0
RA354	400	35	150	600	10	35	1.0
RA355	600	35	150	600	10	35	1.0
RA356	800	35	150	600	10	35	1.0
RA357	1000	35	150	600	10	35	1.0

35 AMPERE BUTTON RECTIFIER/SRA

SRA351	50	35	150	600	10	35	1.0
SRA352	100	35	150	600	10	35	1.0
SRA353	200	35	150	600	10	35	1.0
SRA354	400	35	150	600	10	35	1.0
SRA355	600	35	150	600	10	35	1.0
SRA356	800	35	150	600	10	35	1.0
SRA357	1000	35	150	600	10	35	1.0

Section 4

Case Style Reference Guide

Chatsworth, CA
Microsemi
Progress Powered by Technology

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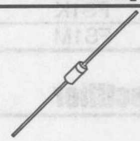
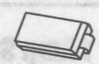
Microsemi Chatsworth, CA
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

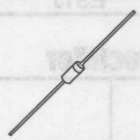
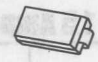
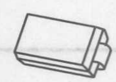
CASE STYLE REFERENCE GUIDE

Please note that this guide does not include the entire Microsemi Chatsworth product offering. It only includes those part numbers that are offered in a variety of packages. In some cases, the different packages could result in different electrical characteristics of the device. Please be sure to always check each specific data sheet for detailed information.

1 Amp Schottky Barrier Rectifier

				
V_{PK}	***DO-41***	***MELF***	***SMA***	***SMB***
20V	1N5817	DL5817	SS12	SK12
30V	1N5818	DL5818	SS13	SK13
40V	1N5819	DL5819	SS14	SK14
50V	SR105	DLSR105	SS15	SK15
60V	SR106	DLSR106	SS16	SK16
80V	SR108	DLSR108	SS18	SK18
100V	SR1010	DLSR1010	SS110	SK110

1 Amp Standard Recovery Rectifier

				
V_{PK}	***DO-41***	***MELF***	***SMA***	***SMB***
50V	1N4001	DL4001	GS1A	S1A
100V	1N4002	DL4002	GS1B	S1B
200V	1N4003	DL4003	GS1D	S1D
400V	1N4004	DL4004	GS1G	S1G
600V	1N4005	DL4005	GS1J	S1J
800V	1N4006	DL4006	GS1K	S1K
1000V	1N4007	DL4007	GS1M	S1M

Chatsworth, CA
Microsemi
Progress Powered by Technology

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Chatsworth, Ca 91311
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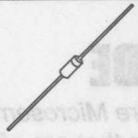
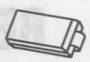
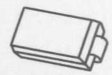
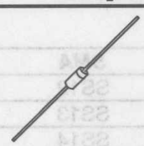
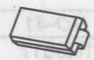
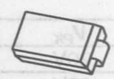
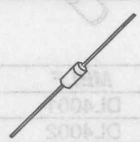
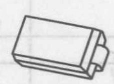
1 Amp Fast Recovery Rectifier

				
V_{PK}	**DO-41**	**MELF**	**SMA**	**SMB**
50V	1N4933	DL4933	FS1A	FR1A
100V	1N4934	DL4934	FS1B	FR1B
200V	1N4935	DL4935	FS1D	FR1D
400V	1N4936	DL4936	FS1G	FR1G
600V	1N4937	DL4937	FS1J	FR1J
800V	1N4947	DL4947	FS1K	FR1K
1000V	1N4948	DL4948	FS1M	FR1M

1 Amp Super Fast Recovery Rectifier

				
V_{PK}	**DO-41**	**MELF**	**SMA**	**SMB**
50V	SF11	DLSF11	ES1A	ER1A
100V	SF12	DLSF12	ES1B	ER1B
150V	SF13	DLSF13	ES1C	ER1C
200V	SF14	DLSF14	ES1D	ER1D
400V	SF16	DLSF16	ES1G	ER1G
600V	SF18	DLSF18	ES1J	ER1J

1.5 Amp Standard Recovery Rectifier

		
V_{PK}	**DO-15**	**SMB**
50V	1N5391	S2A
100V	1N5392	S2B
200V	1N5393	S2D
400V	1N5395	S2G
600V	1N5397	S2J
800V	1N5398	S2K
1000V	1N5399	S2M

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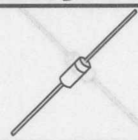
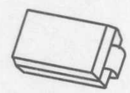
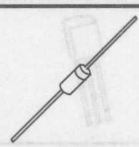
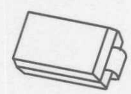
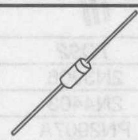
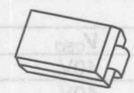
3 Amp Schottky Barrier Rectifier

		
V_{PK}	***DO-201AD***	***SMC***
20V	1N5820	SK32
30V	1N5821	SK33
40V	1N5822	SK34
50V	SR305	SK35
60V	SR306	SK36
80V	SR308	SK38
100V	SR3010	SK3100

3 Amp Standard Recovery Rectifier

		
V_{PK}	***DO-201AD***	***SMC***
50V	1N5400	S3A
100V	1N5401	S3B
200V	1N5402	S3D
400V	1N5404	S3G
600V	1N5406	S3J
800V	1N5407	S3K
1000V	1N5408	S3M

3 Amp Fast Recovery Rectifier

		
V_{PK}	***DO-201AD***	***SMC***
50V	FR301	FR3A
100V	FR302	FR3B
200V	FR303	FR3D
400V	FR304	FR3G
600V	FR305	FR3J
800V	FR306	FR3K
1000V	FR307	FR3M

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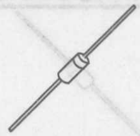
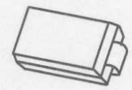
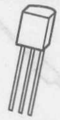
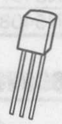
3 Amp Super Fast Recovery Rectifier

		
V_{PK}	***DO-201AD***	***SMC***
50V	SF31	ER3A
100V	SF32	ER3B
200V	SF34	ER3D
400V	SF35	ER3G
600V	SF36	ER3J
800V	SF38	ER3K
1000V	SF310	ER3M

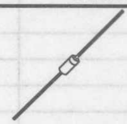
NPN Transistors

		
V_{CEO}	***TO92***	***SOT23***
40V	2N3904	MMBT3904
40V	2N4401	MMBT4401
40V	PN2222A	MMBT2222A

PNP Transistors

		
V_{CEO}	***TO92***	***SOT23***
40V	2N3906	MMBT3906
40V	2N4403	MMBT4403
60V	PN2907A	MMBT2907A

Switching Diodes

			
V_{PK}	***DO-35***	***MINIMELF***	***SOT23***
100V	1N4148	DL4148	MMBD4148

Section 5

Product Datasheets

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1N4001 thru 1N4007

1 Amp Rectifier 50 - 1000 Volts

Features

- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings

- Operating Temperature: -50°C to +175°C
- Storage Temperature: -50°C to +175°C
- Maximum Thermal Resistance; 20°C/W Junction To Lead

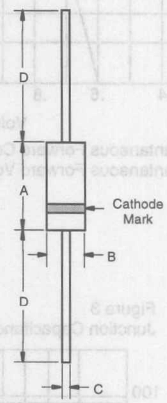
Microsemi Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N4001	---	50V	35V	50V
1N4002	---	100V	70V	100V
1N4003	---	200V	140V	200V
1N4004	---	400V	280V	400V
1N4005	---	600V	420V	600V
1N4006	---	800V	560V	800V
1N4007	---	1000V	700V	1000V

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 50µA	$T_J = 25°C$ $T_J = 125°C$
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

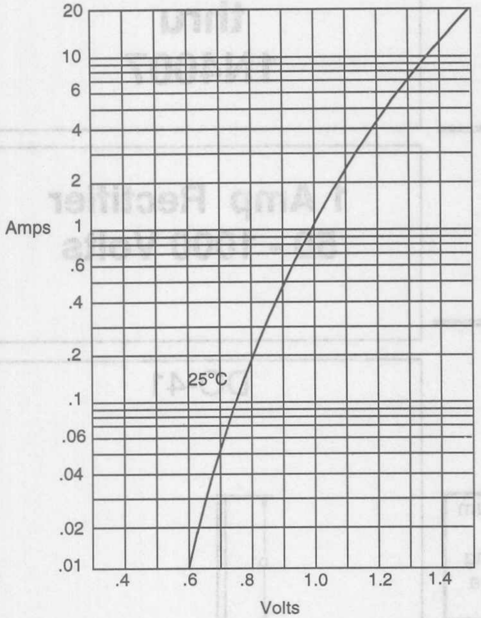
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

DO-41



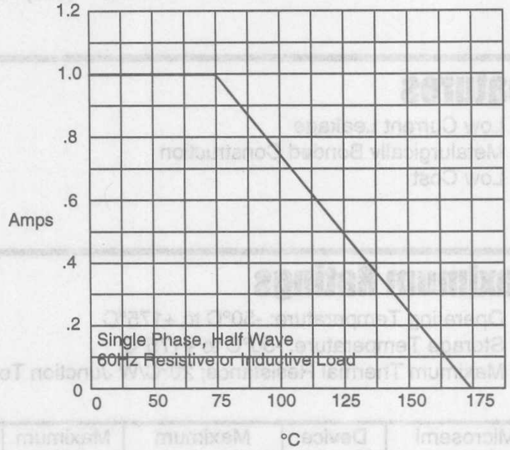
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



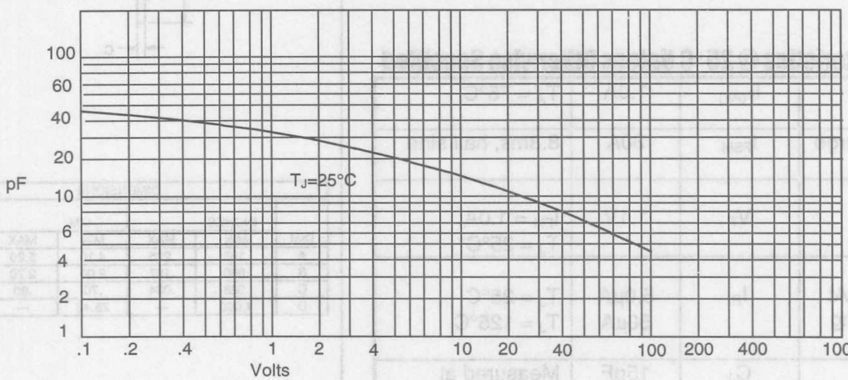
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



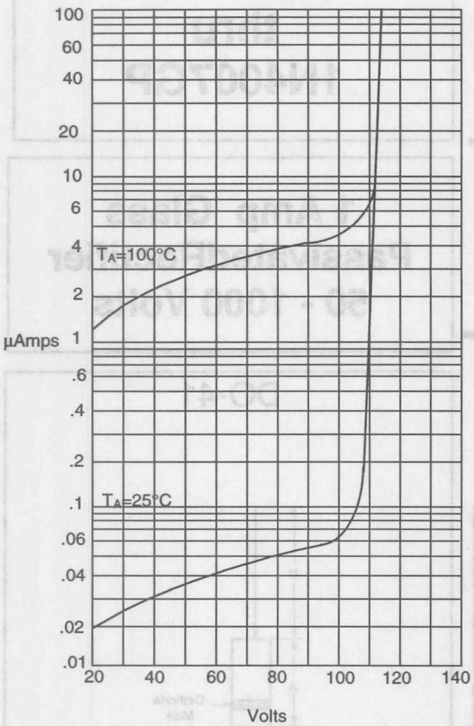
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current

Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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1N4001GP thru 1N4007GP

1 Amp Glass PassivatedRectifier 50 - 1000 Volts

Features

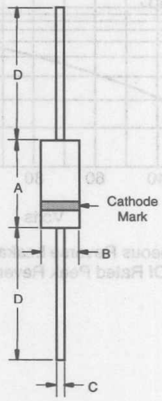
- Glass Passivated Junction
- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings

- Operating Temperature: -50°C to +175°C
- Storage Temperature: -50°C to +175°C
- Maximum Thermal Resistance; 20°C/W Junction To Lead

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N4001GP	---	50V	35V	50V
1N4002GP	---	100V	70V	100V
1N4003GP	---	200V	140V	200V
1N4004GP	---	400V	280V	400V
1N4005GP	---	600V	420V	600V
1N4006GP	---	800V	560V	800V
1N4007GP	---	1000V	700V	1000V

DO-41



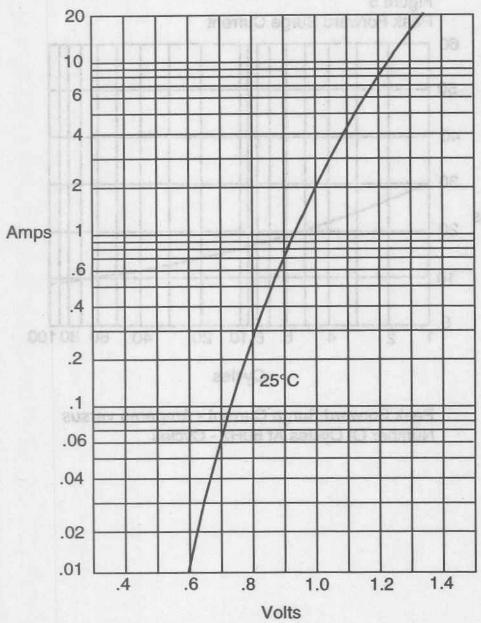
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	$T_J = 25°C$ $T_J = 125°C$
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

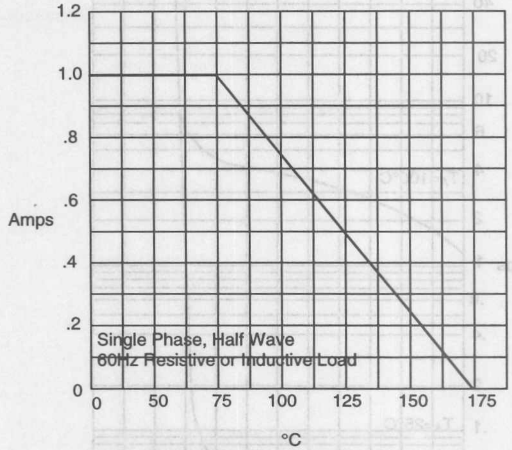
*Pulse test: Pulse width 300 μsec, Duty cycle 2%

Figure 1
Typical Forward Characteristics



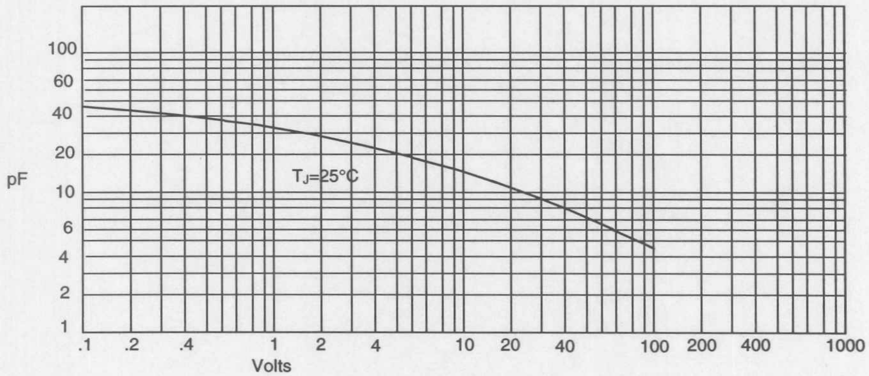
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



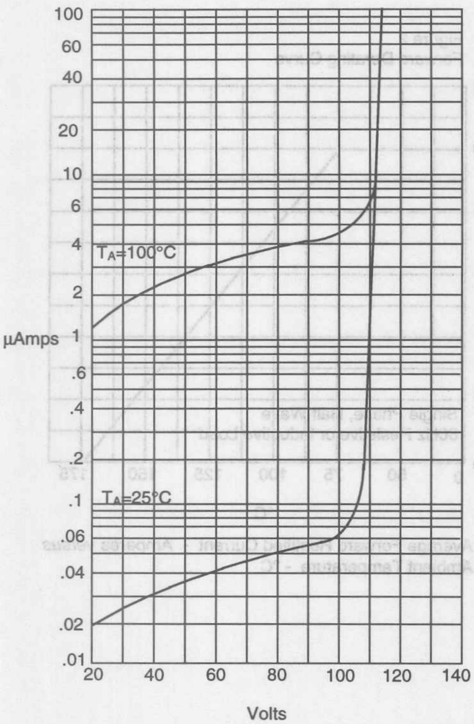
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



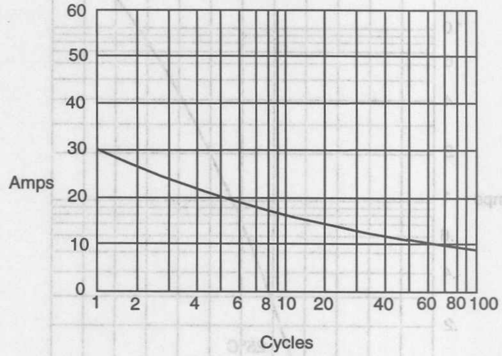
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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1N4148

500mW 100 Volt Silicon Epitaxial Diode

Features

- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings

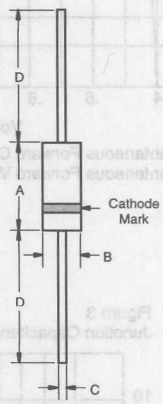
- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 35°C/W Junction To Ambient

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_O	150mA	Resistive Load f > 50Hz
Power Dissipation	P_{TOT}	500mW	
Junction Temperature	T_J	200°C	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 50µA	V_R=20Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	4pF	Measured at 1.0MHz, V_R=4.0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 6V R_L=100Ω

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

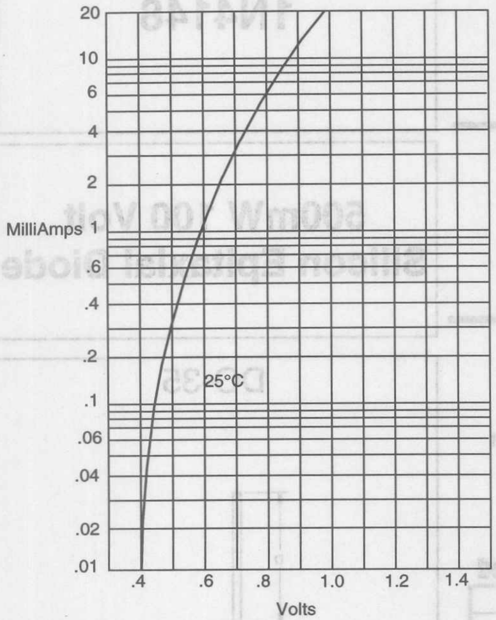
DO-35



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.166	---	4.2	
B	---	.079	---	2.00	
C	---	.020	---	.52	
D	1.000	---	25.40	---	

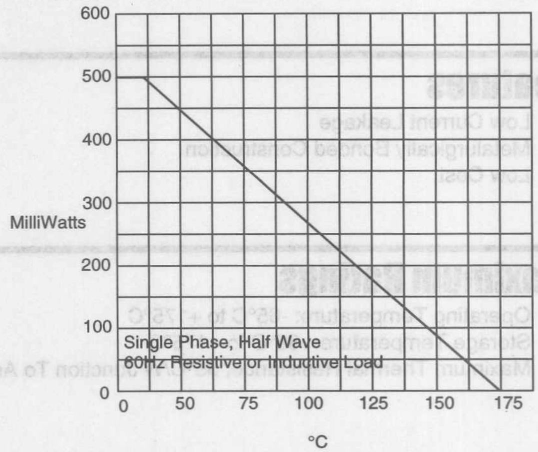
1N4148

Figure 1
Typical Forward Characteristics



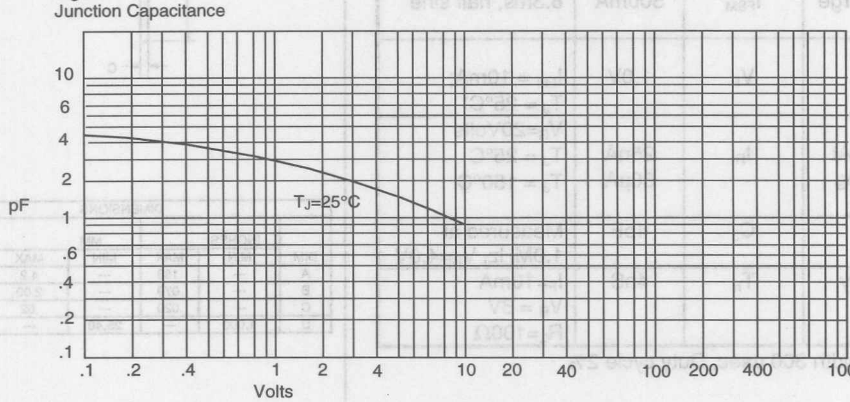
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



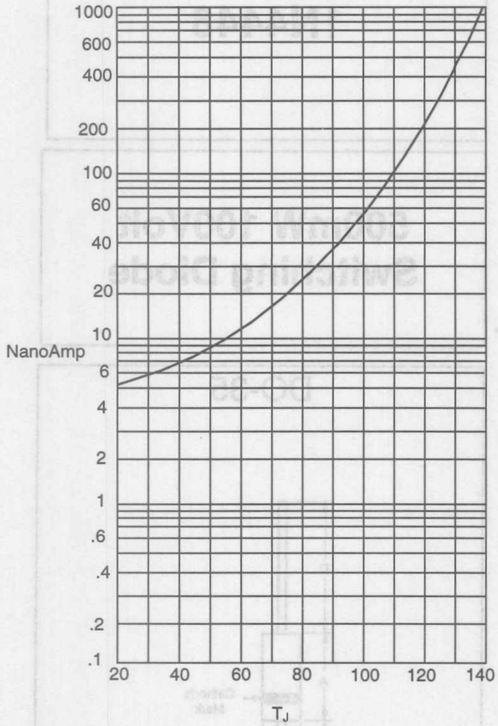
Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



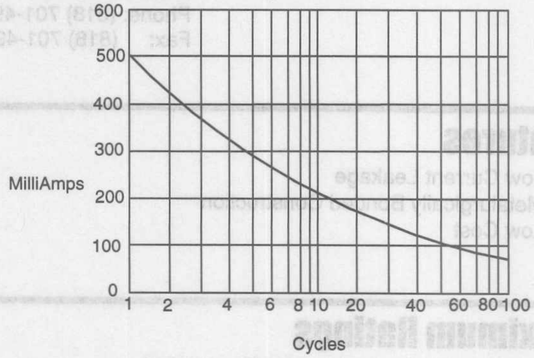
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes *versus* Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

T_A=25°C
T_A=100°C

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1N4448

500mW 100Volt Switching Diode

Features

- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings

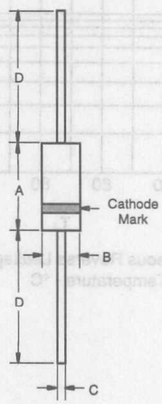
- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 35°C/W Junction To Ambient

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_O	150mA	Resistive Load f > 50Hz
Power Dissipation	P_{TOT}	500mW	
Junction Temperature	T_J	200°C	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 100mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 50µA	V_R=75Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	4pF	Measured at 1.0MHz, V_R=4.0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 6V R_L=100Ω

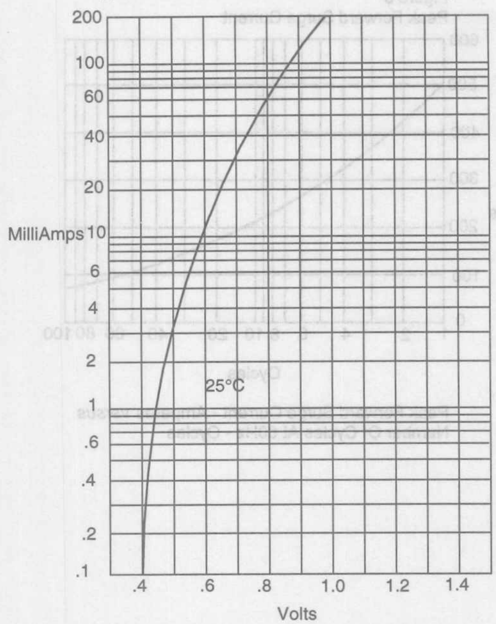
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

DO-35



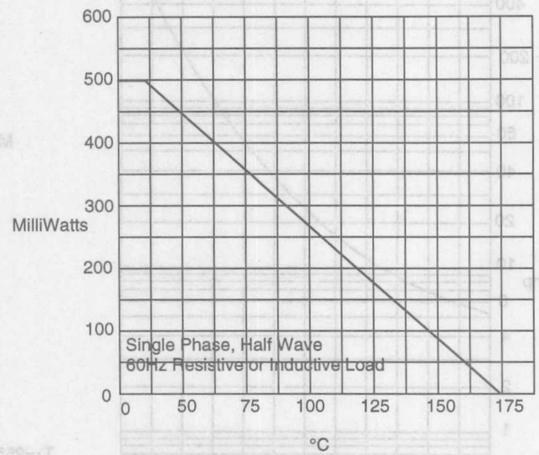
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.166	---	4.2	
B	---	.079	---	2.00	
C	---	.020	---	.52	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



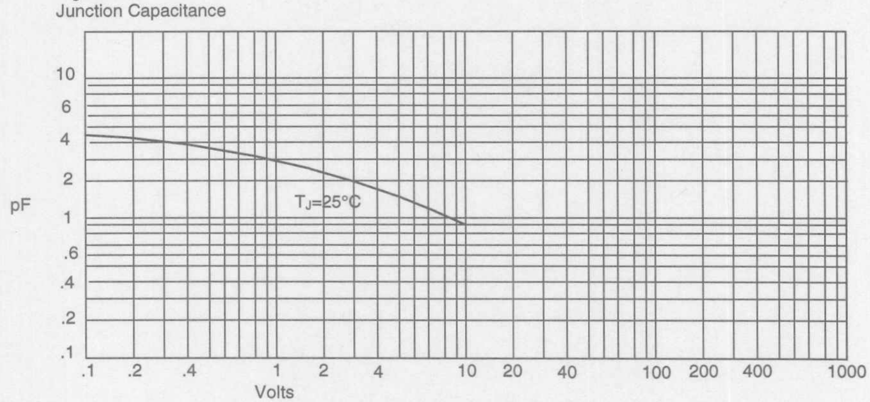
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



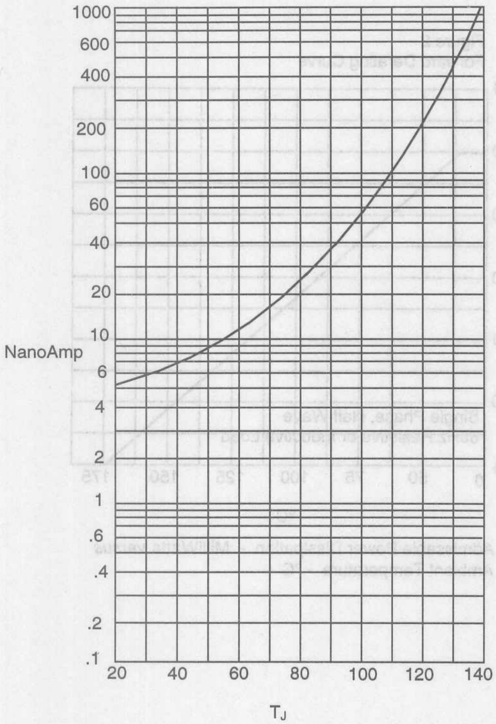
Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



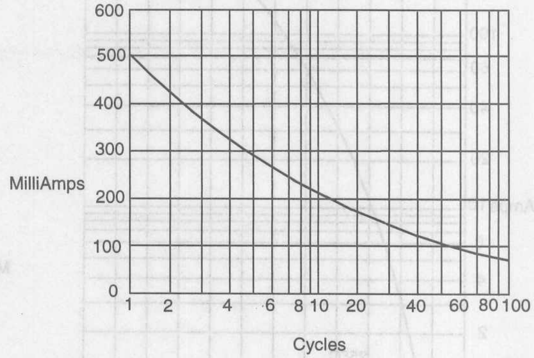
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes *versus*
Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

T_A=25°C
T_A=100°C

Chatsworth, CA

Microsemi

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Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

1N4933
thru
1N4937

1 Amp Fast Recovery Rectifier
50 - 600 Volts

Features

- Low Leakage Current
- Metalurgically Bonded Construction
- Low Cost
- Fast Switching

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

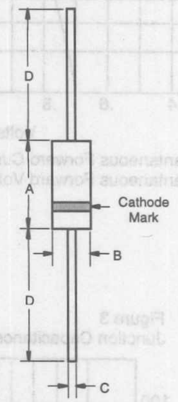
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N4933	---	50V	35V	50V
1N4934	---	100V	70V	100V
1N4935	---	200V	140V	200V
1N4936	---	400V	280V	400V
1N4937	---	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_A =55°C
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	I_{FM} = 1.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 100μA	T_J = 25°C T_J = 125°C
Maximum Reverse Recovery Time	T_{rr}	200ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 μsec, Duty cycle 1%

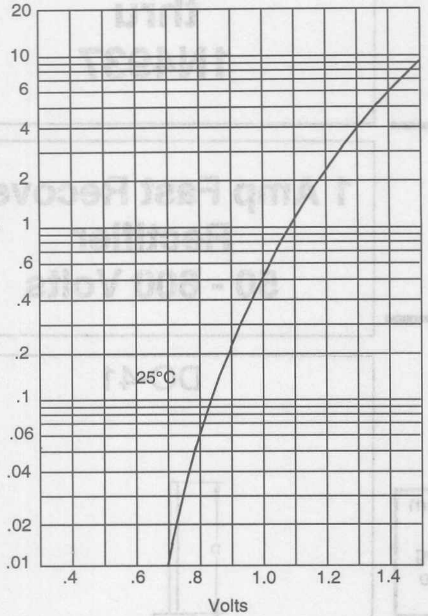
DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

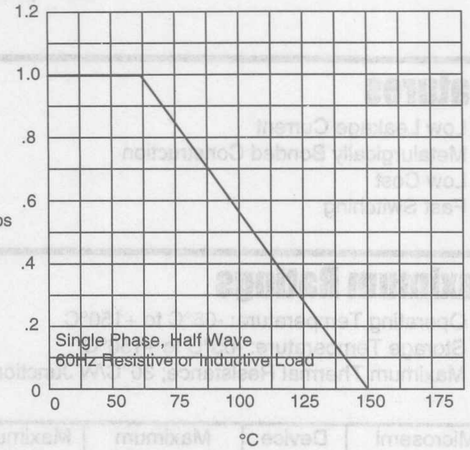
1N4933 thru 1N4937

Figure 1
Typical Forward Characteristics



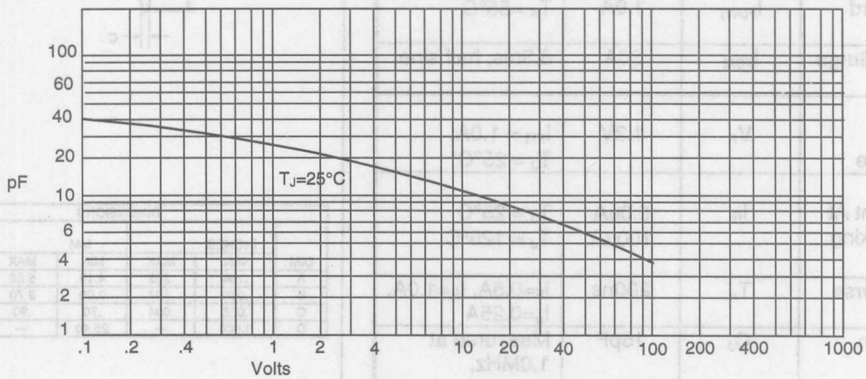
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



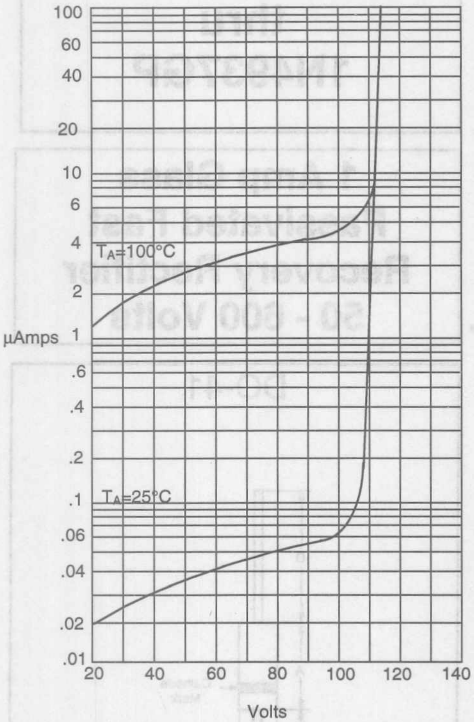
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



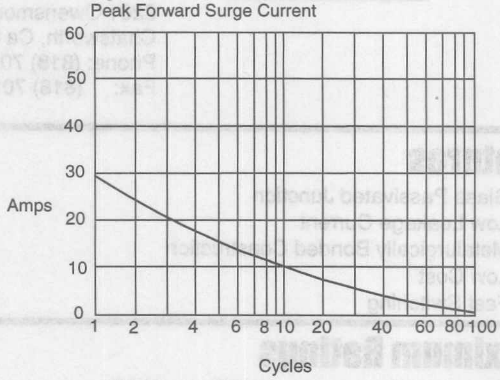
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



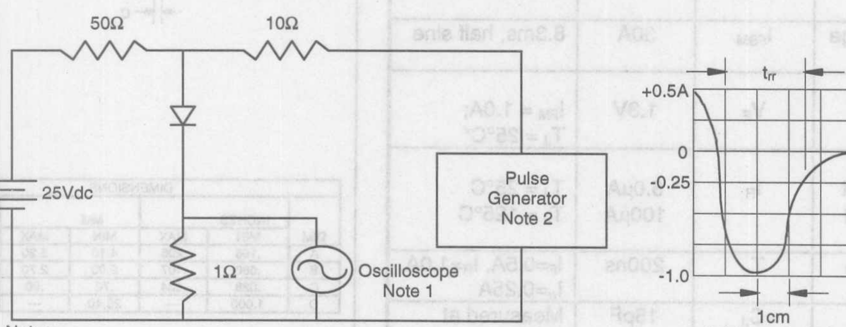
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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Phone: (818) 701-4933
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1N4933GP thru 1N4937GP

1 Amp Glass Passivated Fast Recovery Rectifier 50 - 600 Volts

Features

- Glass Passivated Junction
- Low Leakage Current
- Metalurgically Bonded Construction
- Low Cost
- Fast Switching

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

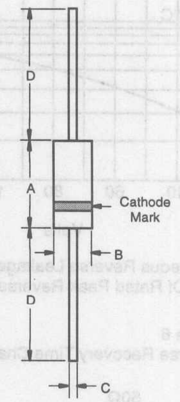
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N4933	---	50V	35V	50V
1N4934	---	100V	70V	100V
1N4935	---	200V	140V	200V
1N4936	---	400V	280V	400V
1N4937	---	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	$T_J = 25°C$ $T_J = 125°C$
Maximum Reverse Recovery Time	T_{rr}	200ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

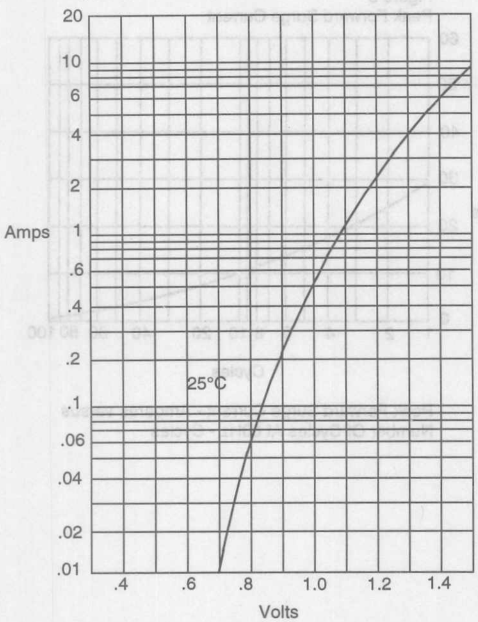
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

DO-41



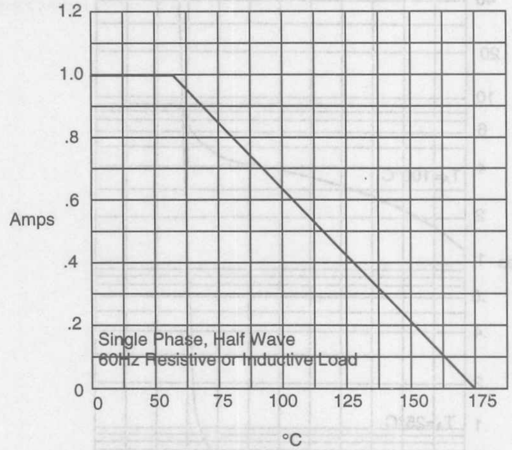
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



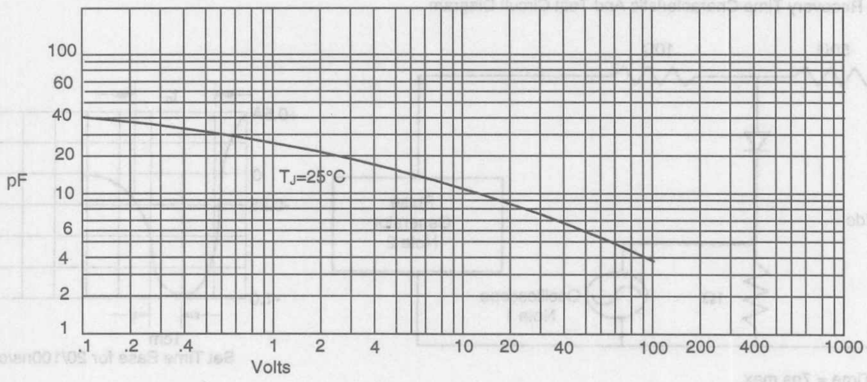
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



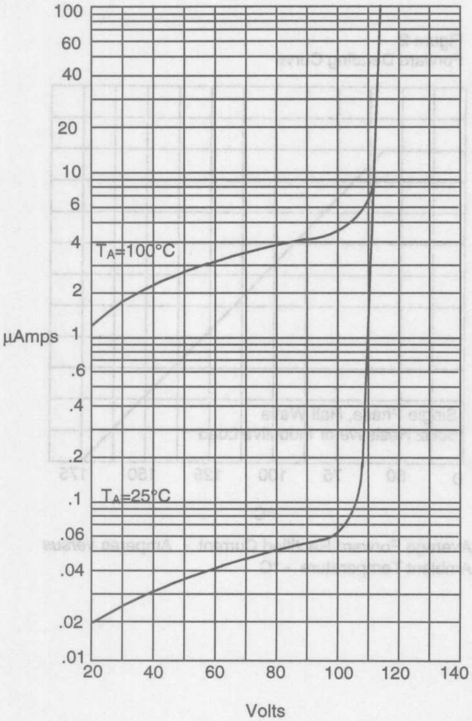
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



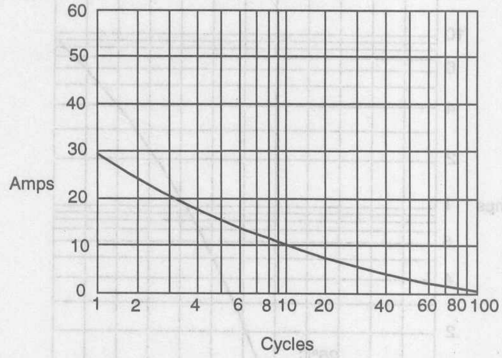
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



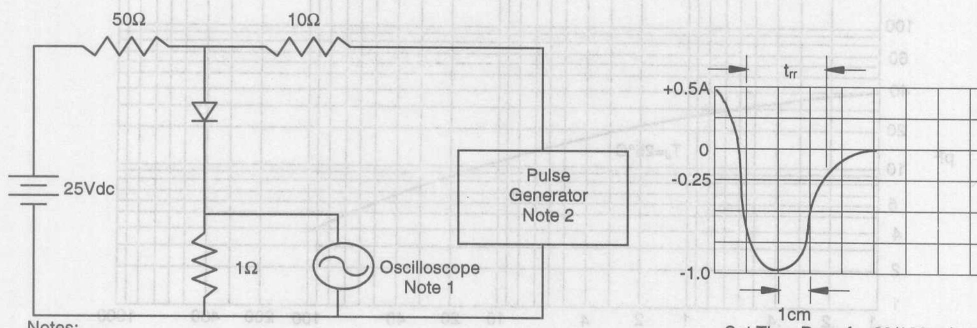
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi Chatsworth, CA
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1N4942 thru 1N4948

1 Amp Fast Recovery Rectifier 200 - 1000 Volts

Features

- Low Leakage Current
- Metalurgically Bonded Construction
- Low Cost
- Fast Switching For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 50°C/W Junction To Ambient

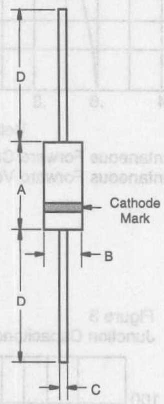
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N4942	---	200V	140V	200V
1N4944	---	400V	280V	400V
1N4946	---	600V	420V	600V
1N4947	---	800V	560V	800V
1N4948	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_A =55°C
Peak Forward Surge Current	I_{FSM}	25A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	I_{FM} = 1.0A; T_A = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	1.0µA 500µA	T_J = 25°C T_J = 175°C
Maximum Reverse Recovery Time 1N4942-4944 1N4946-4947 1N4947	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

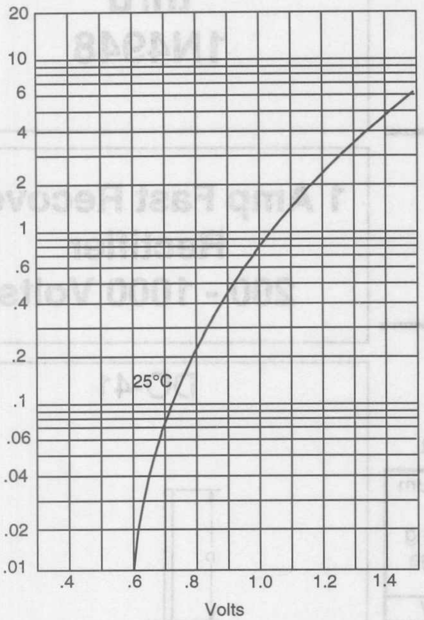
DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

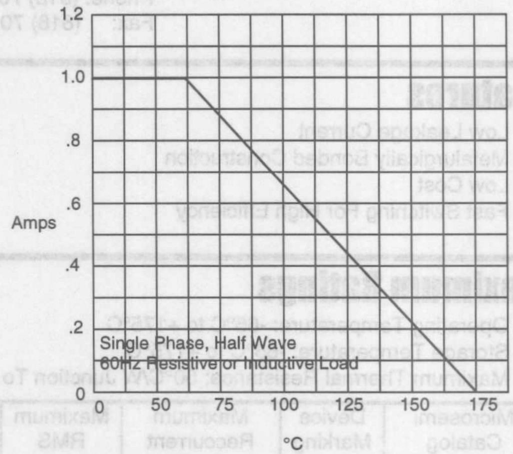
1N4942 thru 1N4948

Figure 1
Typical Forward Characteristics



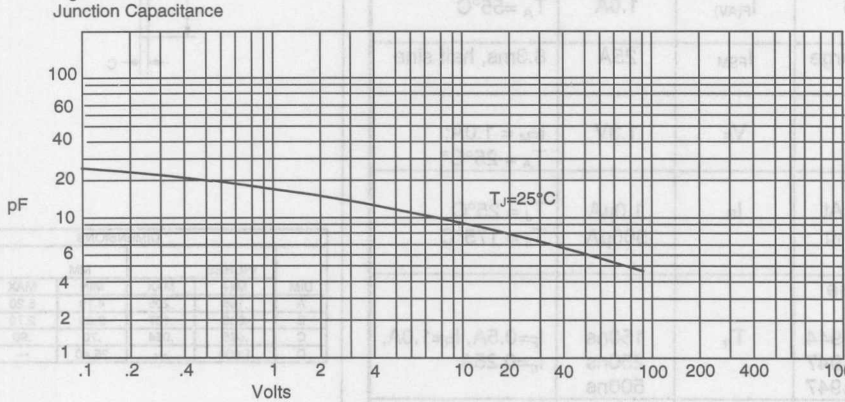
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



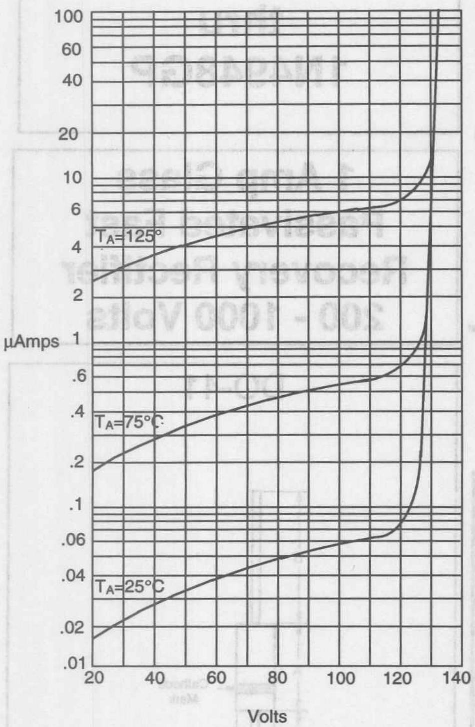
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



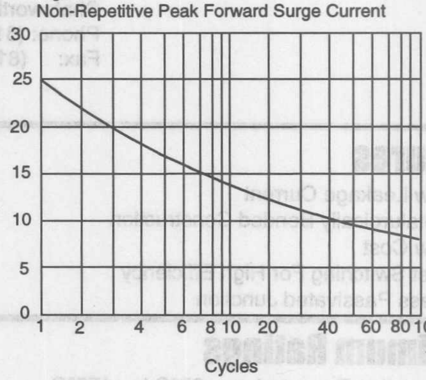
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



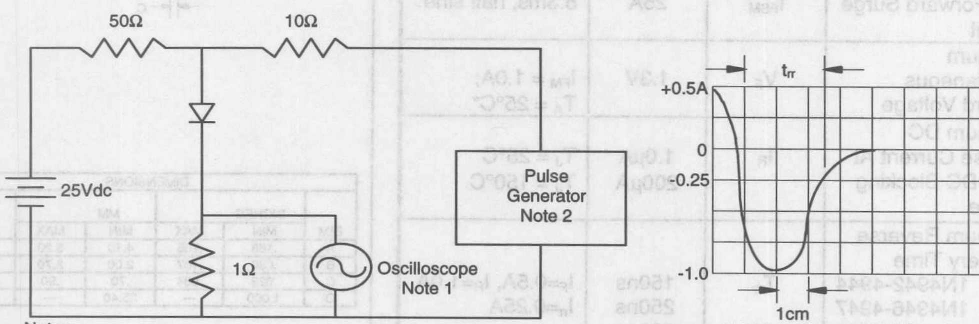
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Non-Repetitive Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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1N4942GP thru 1N4948GP

1 Amp Glass Passivated Fast Recovery Rectifier 200 - 1000 Volts

Features

- Low Leakage Current
- Metalurgically Bonded Construction
- Low Cost
- Fast Switching For High Efficiency
- Glass Passivated Junction

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 50°C/W Junction To Ambient

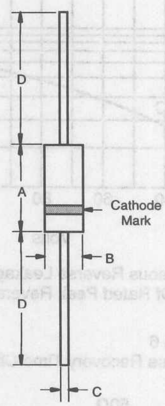
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N4942GP	---	200V	140V	200V
1N4944GP	---	400V	280V	400V
1N4946GP	---	600V	420V	600V
1N4947GP	---	800V	560V	800V
1N4948GP	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_A =55°C
Peak Forward Surge Current	I_{FSM}	25A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	I_{FM} = 1.0A; T_A = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	1.0µA 200µA	T_J = 25°C T_J = 150°C
Maximum Reverse Recovery Time 1N4942-4944 1N4946-4947 1N4947	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

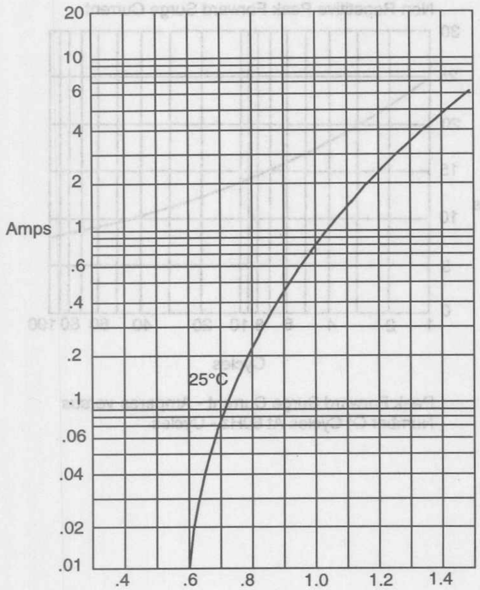
DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

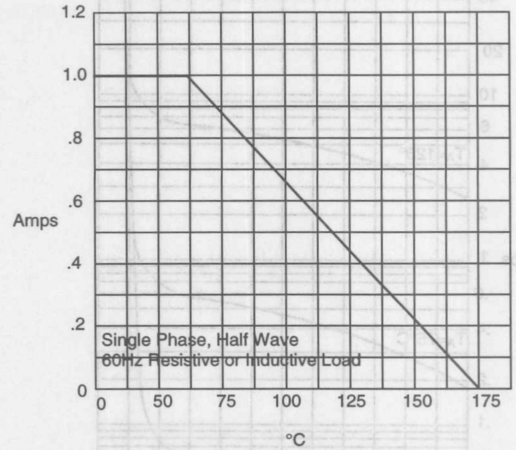
1N4942GP thru 1N4948GP

Figure 1
Typical Forward Characteristics



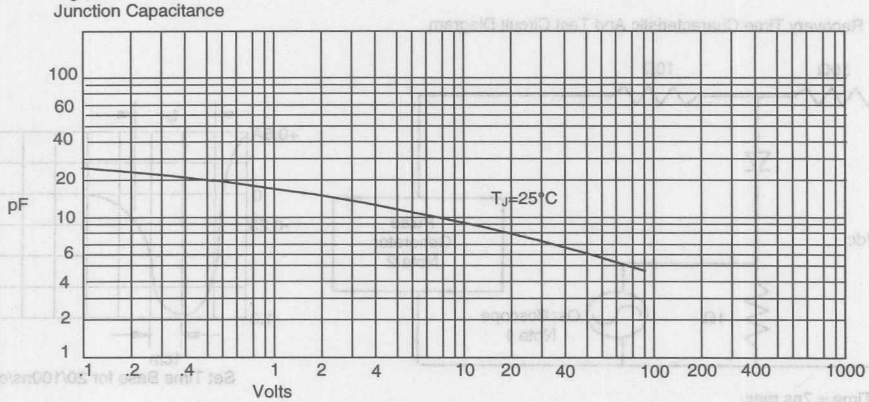
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



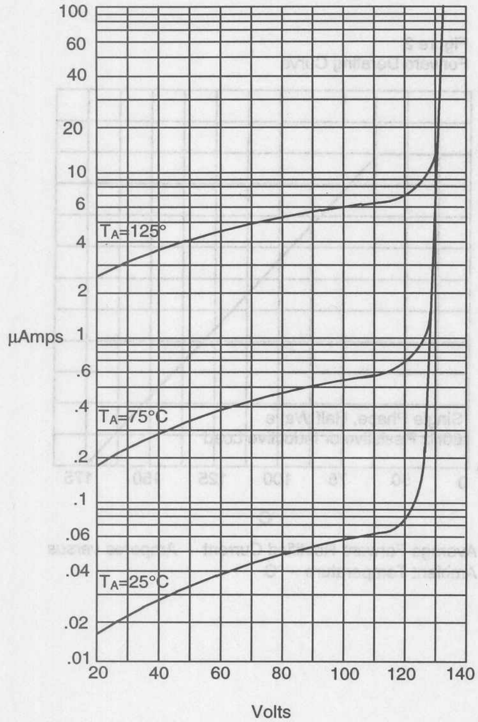
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



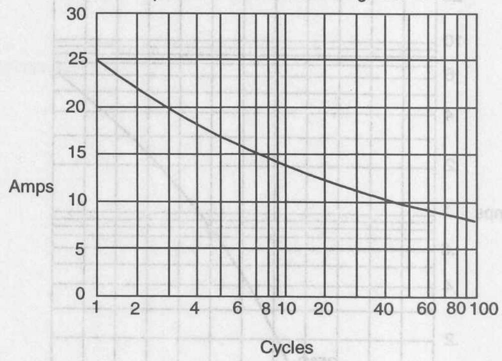
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



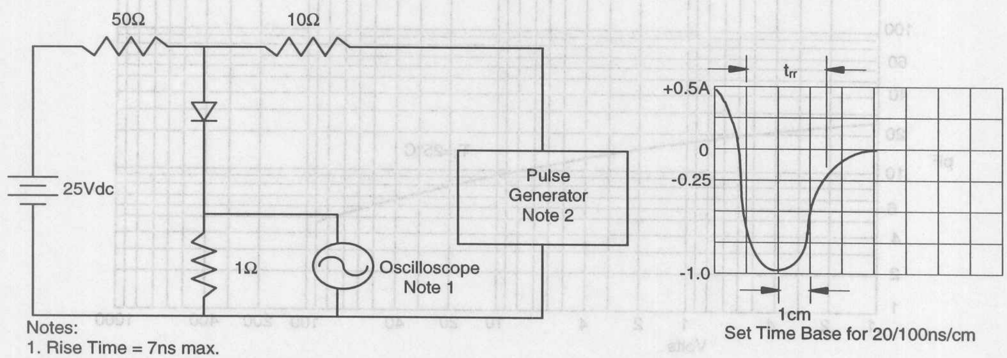
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Non-Repetitive Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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Fax: (818) 701-4939

1N5391 thru 1N5399

1.5 Amp Rectifier 50 - 1000 Volts

Features

- Low Current Leakage
- Low Forward Voltage
- High Current Capability
- Low Cost

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 50°C/W Junction To Lead

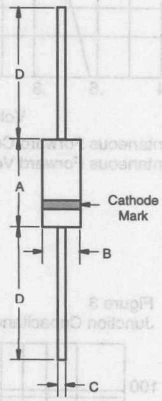
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N5391	---	50V	35V	50V
1N5392	---	100V	70V	100V
1N5393	---	200V	140V	200V
1N5394	---	300V	210V	300V
1N5395	---	400V	280V	400V
1N5396	---	500V	350V	500V
1N5397	---	600V	420V	600V
1N5398	---	800V	560V	800V
1N5399	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.5A	$T_A = 70°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	$I_{FM} = 1.5A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	$T_J = 25°C$ $T_J = 100°C$
Typical Junction Capacitance	C_J	20pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 μsec, Duty cycle 1%

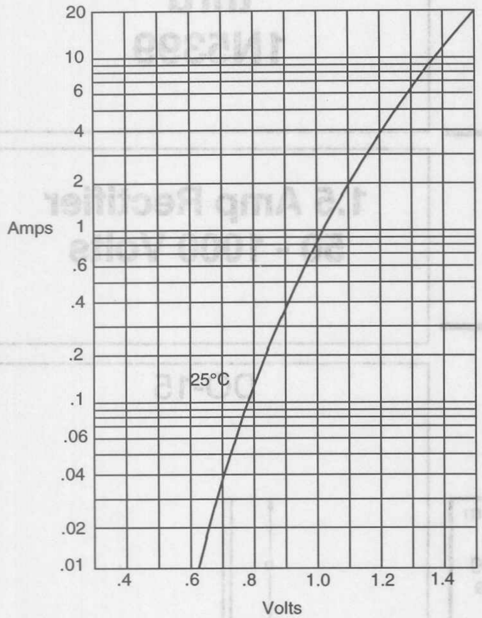
DO-15



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

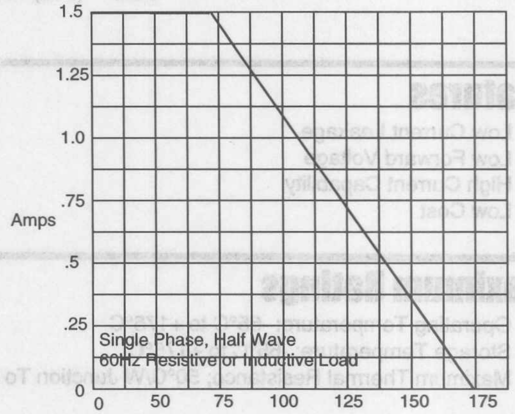
1N5391 thru 1N5399

Figure 1
Typical Forward Characteristics



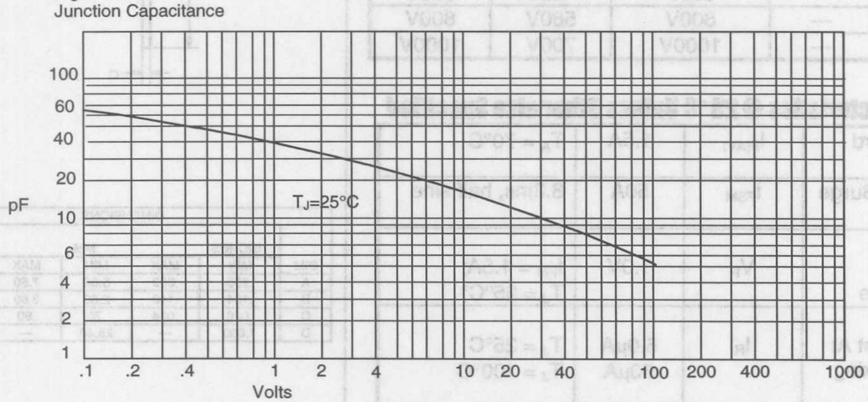
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



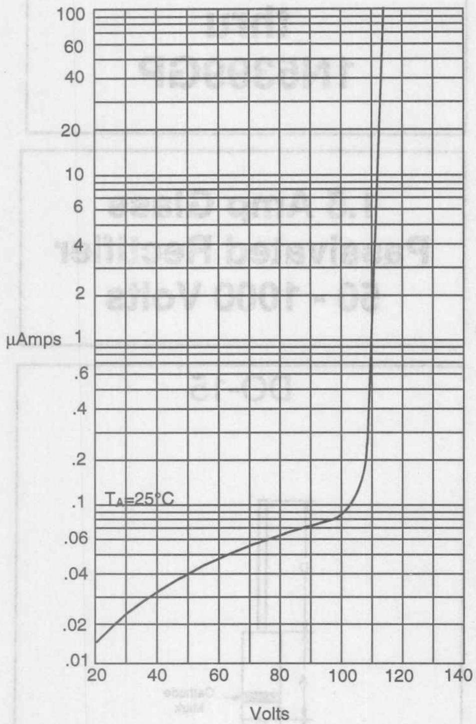
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



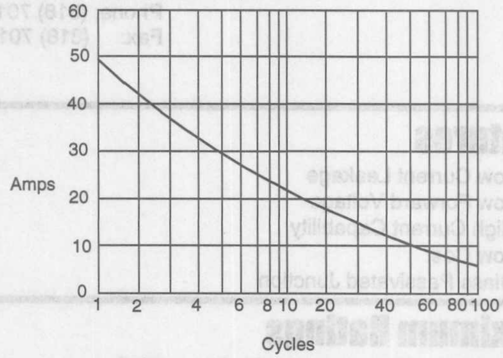
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

1N5391GP thru 1N5399GP

1.5 Amp Glass Passivated Rectifier 50 - 1000 Volts

Features

- Low Current Leakage
- Low Forward Voltage
- High Current Capability
- Low Cost
- Glass Passivated Junction

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 50°C/W Junction To Lead

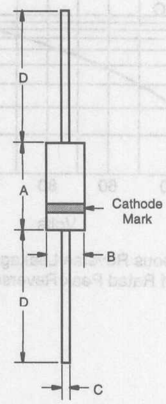
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N5391	---	50V	35V	50V
1N5392	---	100V	70V	100V
1N5393	---	200V	140V	200V
1N5394	---	300V	210V	300V
1N5395	---	400V	280V	400V
1N5396	---	500V	350V	500V
1N5397	---	600V	420V	600V
1N5398	---	800V	560V	800V
1N5399	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.5A	$T_A = 70°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.4V	$I_{FM} = 1.5A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 300µA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

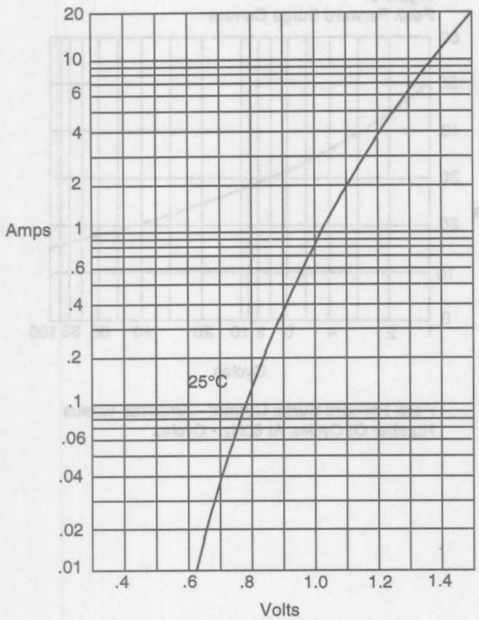
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

DO-15



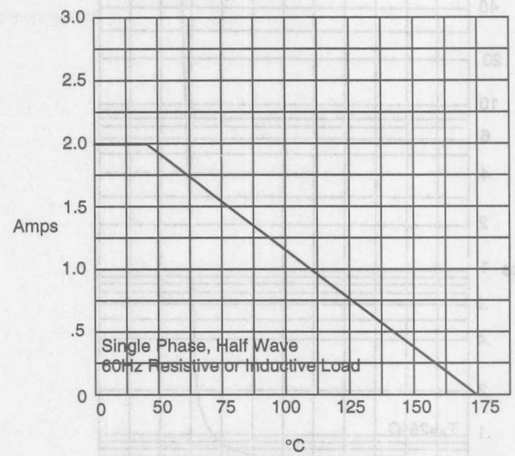
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



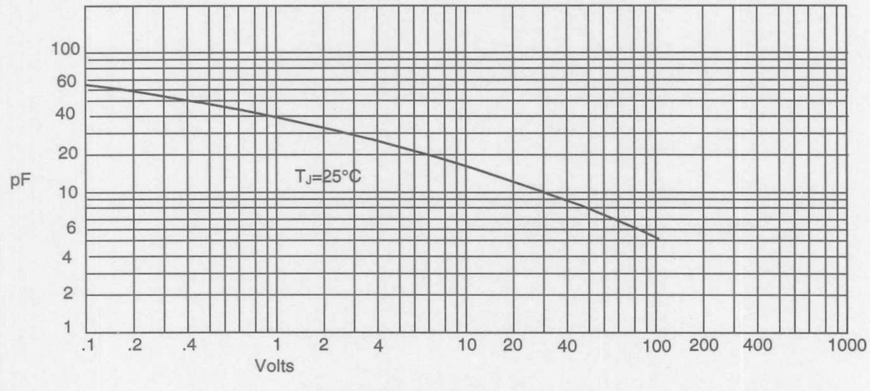
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



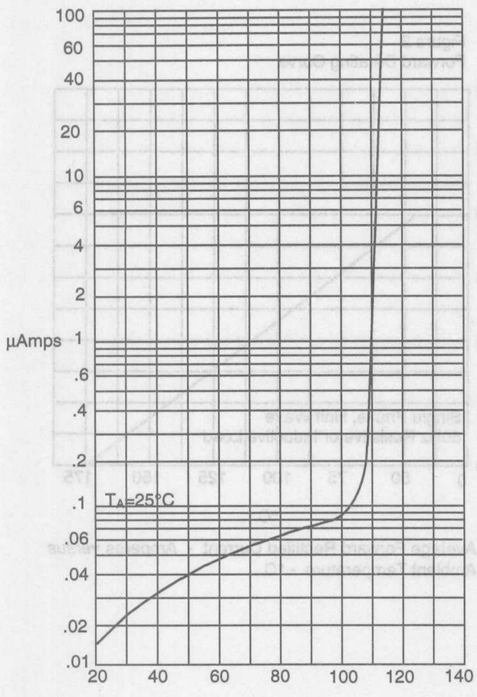
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current

Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Fax: (818) 701-4939

1N5400 thru 1N5408

3 Amp Rectifier 50 - 1000 Volts

Features

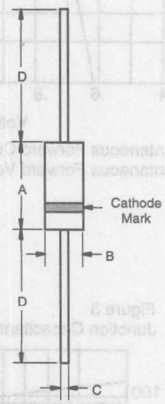
- Low Current Leakage
- Metalurgically Bonded Construction
- Low Forward Voltage
- High Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N5400	---	50V	35V	50V
1N5401	---	100V	70V	100V
1N5402	---	200V	140V	200V
1N5404	---	400V	280V	400V
1N5406	---	600V	420V	600V
1N5407	---	800V	560V	800V
1N5408	---	1000V	700V	1000V

DO-201AD



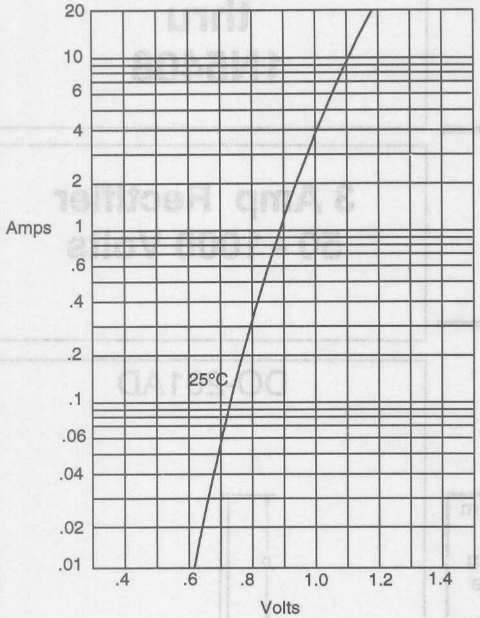
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	$T_A = 105°C$
Peak Forward Surge Current	I_{FSM}	200A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	0.95V	$I_{FM} = 3.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	$T_J = 25°C$ $T_J = 125°C$
Typical Junction Capacitance	C_J	40pF	Measured at 1.0MHz, V_R=4.0V

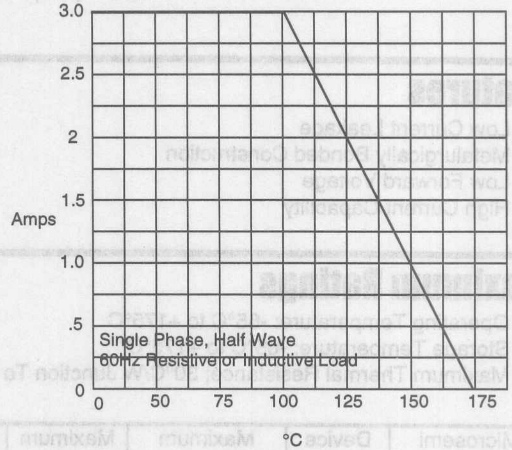
*Pulse test: Pulse width 300 μsec, Duty cycle 2%

Figure 1
Typical Forward Characteristics



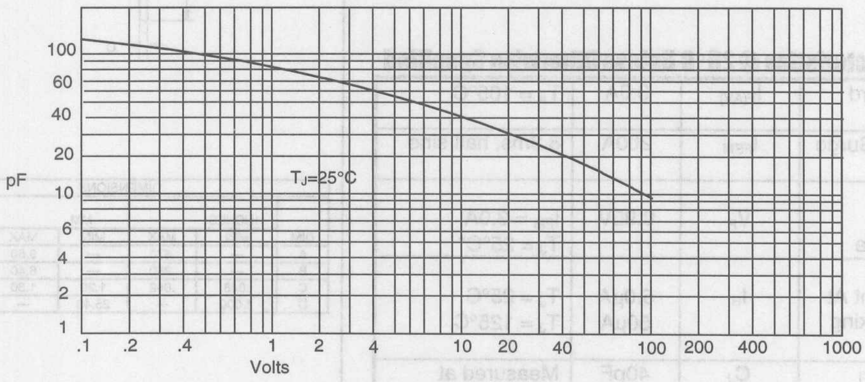
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



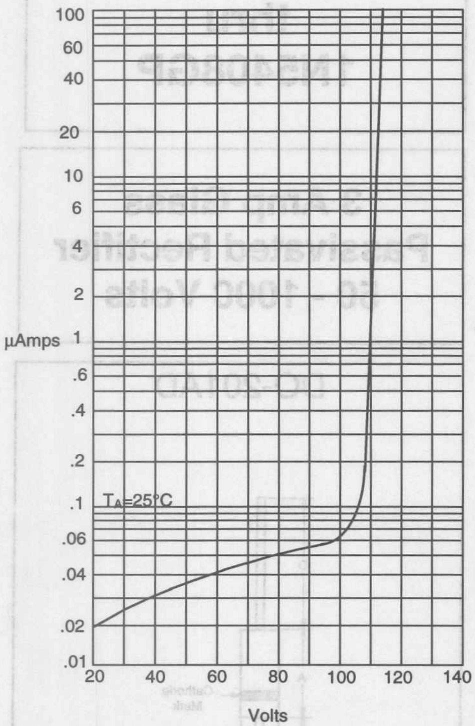
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



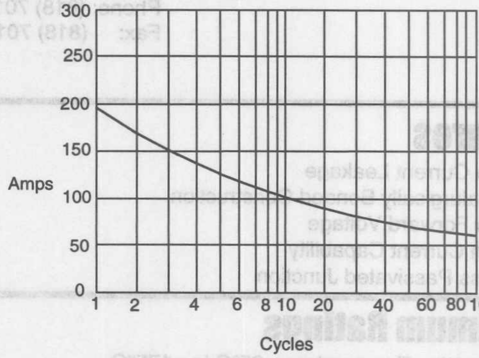
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus* Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

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1N5400GP thru 1N5408GP

3 Amp Glass Passivated Rectifier 50 - 1000 Volts

Features

- Low Current Leakage
- Metalurgically Bonded Construction
- Low Forward Voltage
- High Current Capability
- Glass Passivated Junction

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

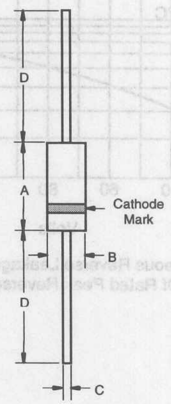
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N5400GP	---	50V	35V	50V
1N5401GP	---	100V	70V	100V
1N5402GP	---	200V	140V	200V
1N5404GP	---	400V	280V	400V
1N5406GP	---	600V	420V	600V
1N5407GP	---	800V	560V	800V
1N5408GP	---	1000V	700V	1000V

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	$T_A = 105°C$
Peak Forward Surge Current	I_{FSM}	200A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM} = 3.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 50µA	$T_J = 25°C$ $T_J = 125°C$
Typical Junction Capacitance	C_J	40pF	Measured at 1.0MHz, V_R=4.0V

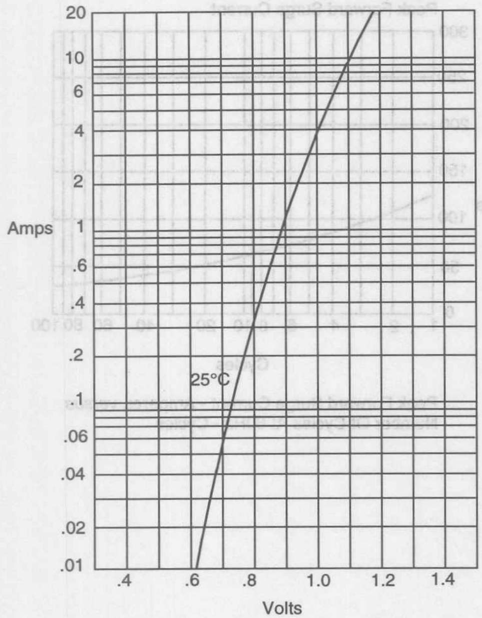
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

DO-201AD



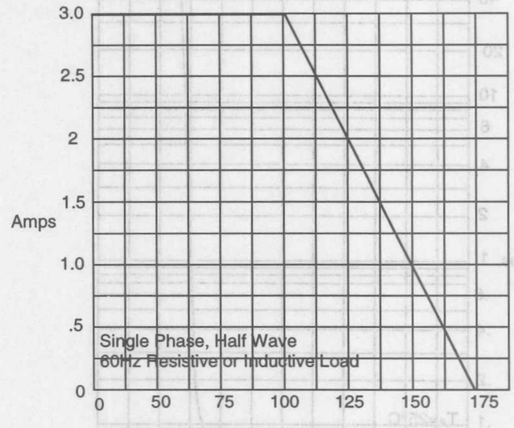
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



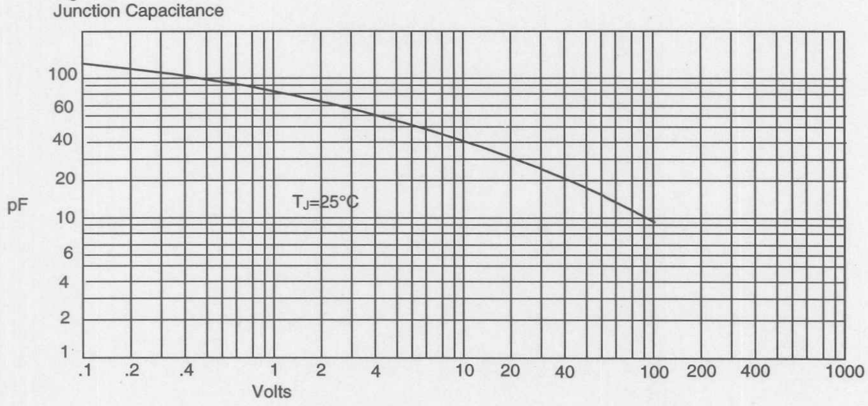
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



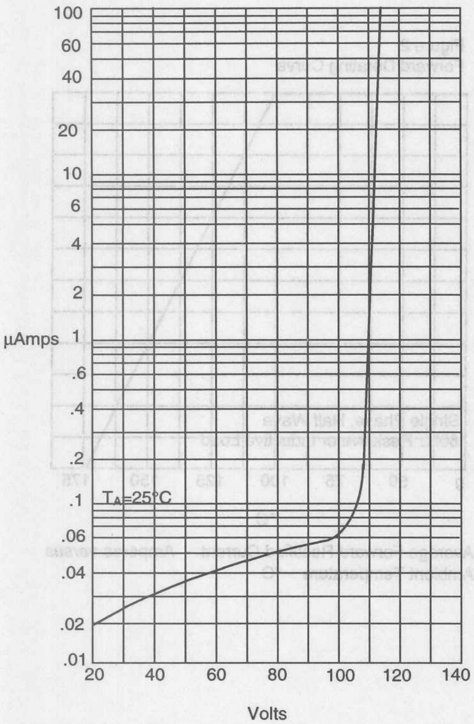
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



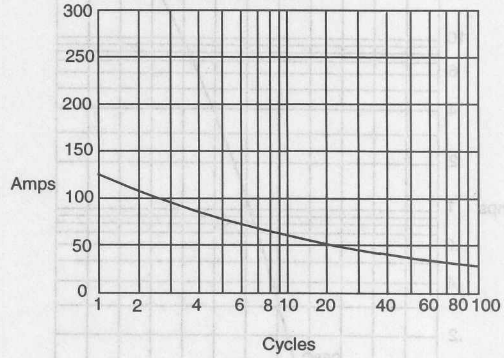
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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1N5817 thru 1N5819

1 Amp Schottky Barrier Rectifier 20 - 40 Volts

Features

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Low Power Loss For High Efficiency
- High Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

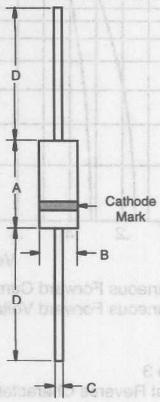
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N5817	---	20V	14V	20V
1N5818	---	30V	21V	30V
1N5819	---	40V	28V	40V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 90°C$
Peak Forward Surge Current	I_{FSM}	25A	8.3ms, half sine
Maximum Instantaneous Forward Voltage 1N5817 1N5818 1N5819	V_F	.45V .55V .60V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	1.0mA	$T_J = 25°C$

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

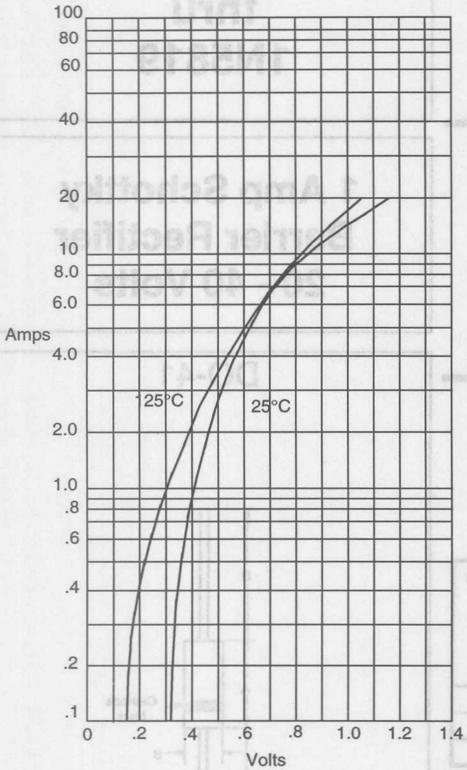
DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

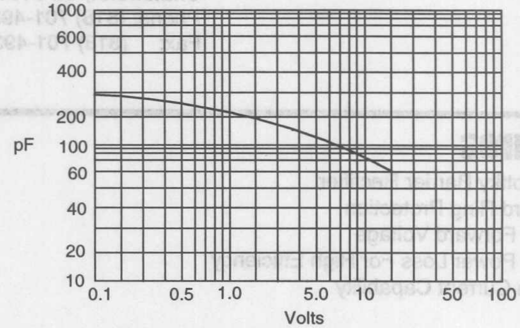
1N5817

Figure 1
Typical Forward Characteristics



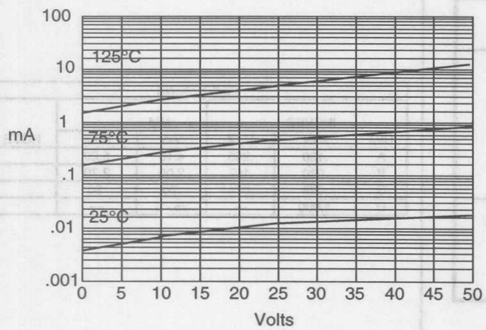
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Junction Capacitance



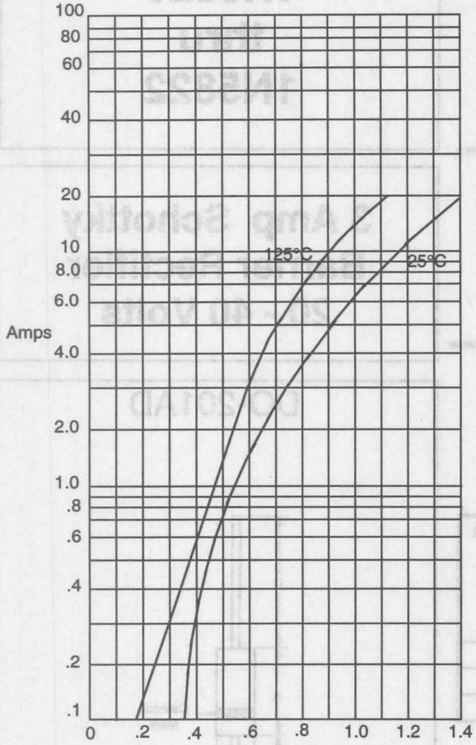
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 3
Typical Reverse Characteristics



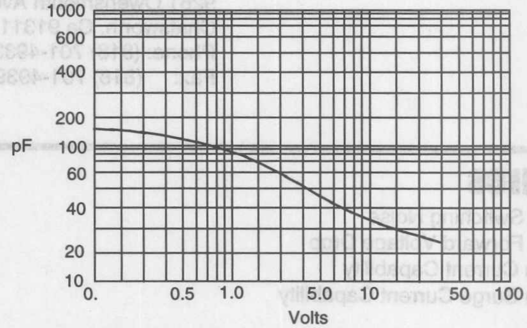
Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

Figure 1
Typical Forward Characteristics



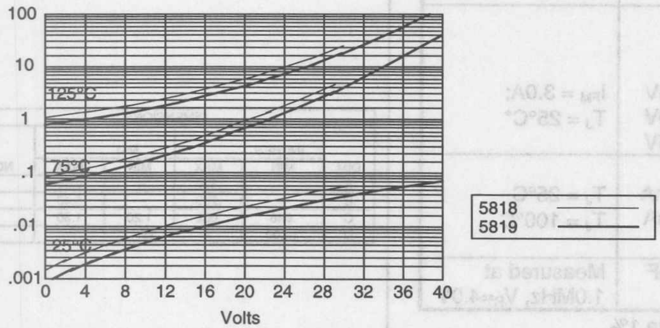
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 3
Typical Reverse Characteristics



Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

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thru
1N5822

3 Amp Schottky Barrier Rectifier 20 - 40 Volts

Features

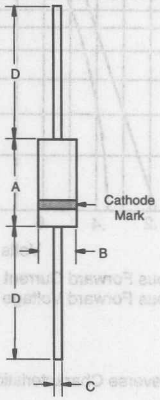
- Low Switching Noise
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +125°C
- Maximum Thermal Resistance; 28°C/W Junction To Ambient

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N5820	---	20V	14V	20V
1N5821	---	30V	21V	30V
1N5822	---	40V	28V	40V

DO-201AD



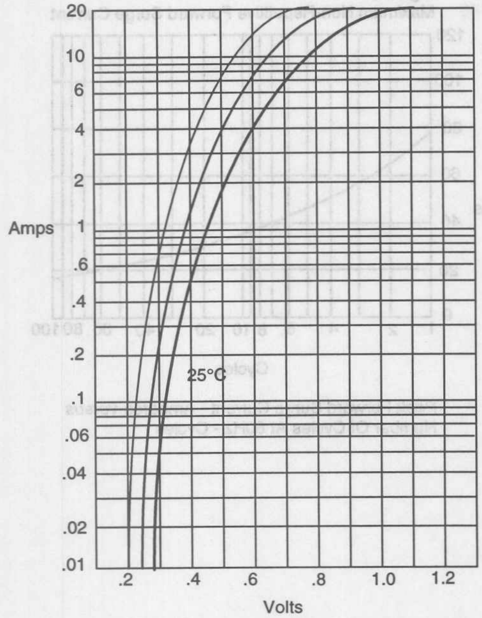
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	$T_A = 85°C$
Peak Forward Surge Current	I_{FSM}	80A	8.3ms, half sine
Maximum Instantaneous Forward Voltage 1N5820 1N5821 1N5822	V_F	.475V .500V .525V	$I_{FM} = 3.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	2.0mA 20mA	$T_J = 25°C$ $T_J = 100°C$
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

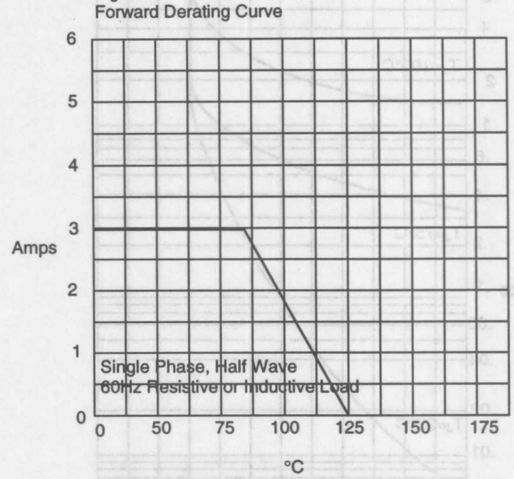
*Pulse test: Pulse width 300 μsec, Duty cycle 1%

Figure 1
Typical Forward Characteristics



Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

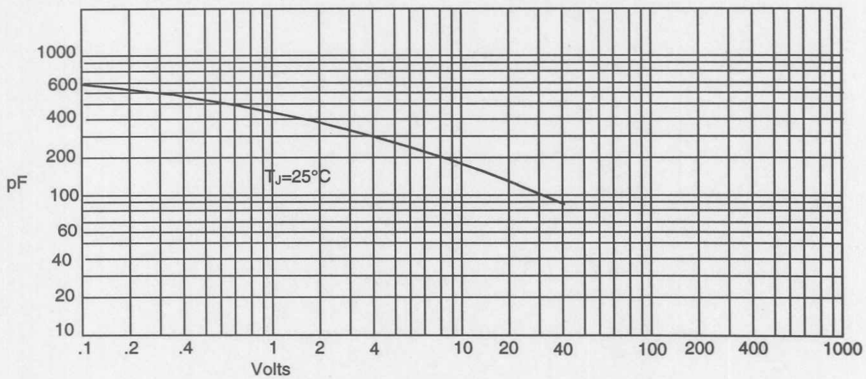
Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

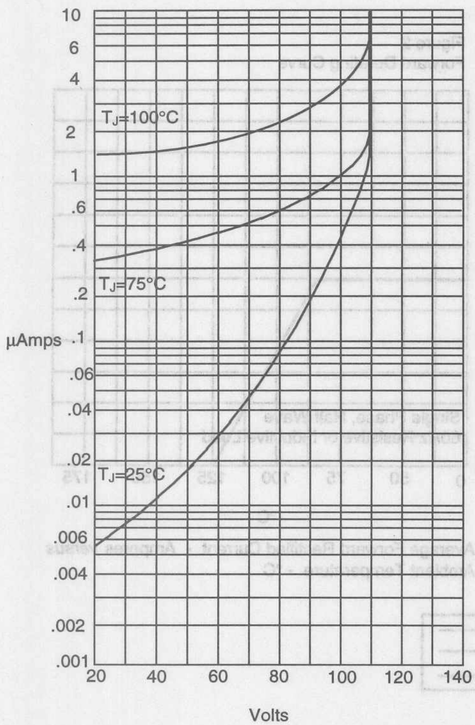
1N5820	———
1N5821	———
1N5822	———

Figure 3
Junction Capacitance



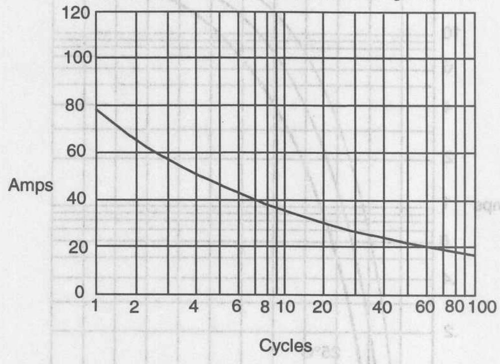
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Fax: (818) 701-4939

1N914(A)(B)

500mW 100 Volt Silicon Epitaxial Diode

Features

- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings

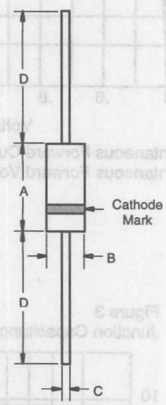
- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 35°C/W Junction To Ambient

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_O	150mA	Resistive Load f > 50Hz
Power Dissipation	P_{TOT}	500mW	
Junction Temperature	T_J	200°C	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 50μA	V_R=20Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	4pF	Measured at 1.0MHz, V_R=4.0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 6V R_L=100Ω

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

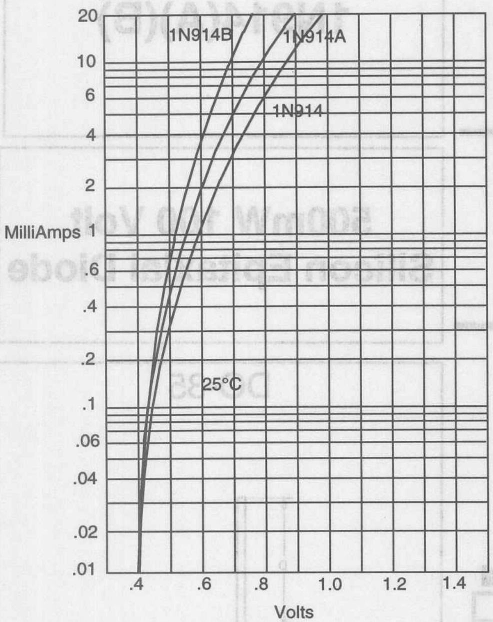
DO-35



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.166	---	4.2	
B	---	.079	---	2.00	
C	---	.020	---	.52	
D	1.000	---	25.40	---	

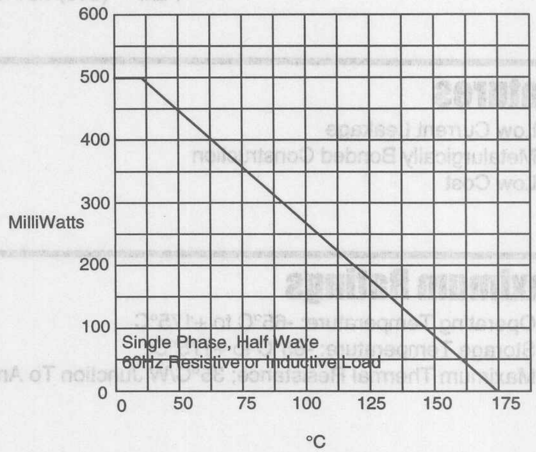
1N914

Figure 1
Typical Forward Characteristics



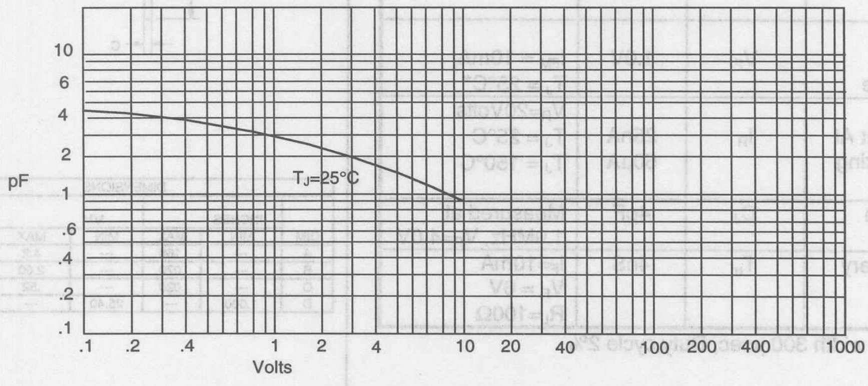
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



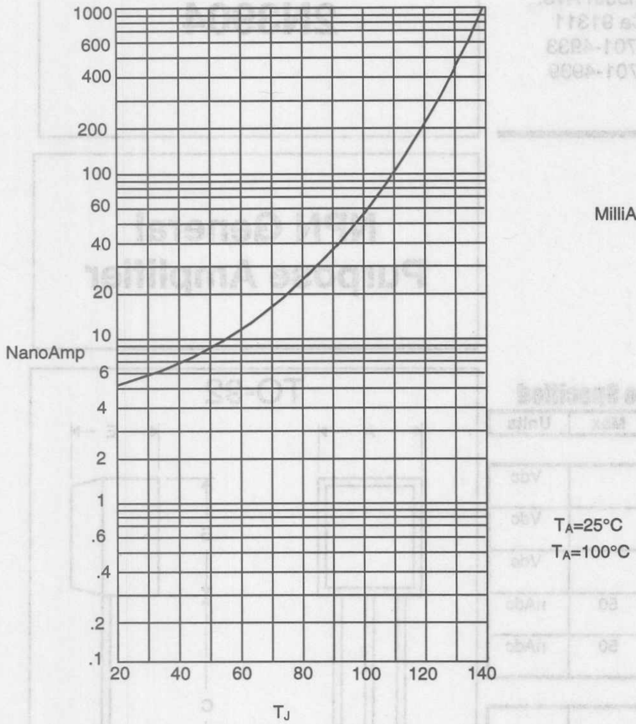
Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



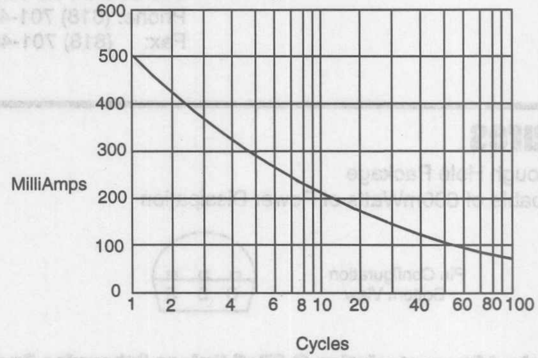
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes *versus*
Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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2N3904

NPN General Purpose Amplifier

Features

- Through Hole Package
- Capable of 600mWatts of Power Dissipation

Pin Configuration
Bottom View

Electrical Characteristics @ 25°C Unless Otherwise Specified

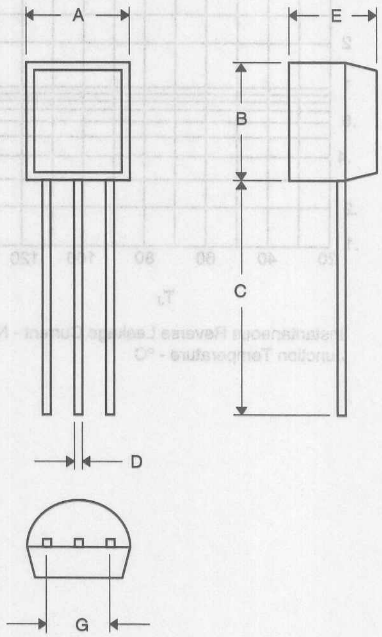
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10µAdc, I_E=0)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10µAdc, I_C=0)	6.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=1.0Vdc)	40		
	(I_C=1.0mAdc, V_{CE}=1.0Vdc)	70		
	(I_C=10mAdc, V_{CE}=1.0Vdc)	100	300	
	(I_C=50mAdc, V_{CE}=1.0Vdc)	60		
	(I_C=100mAdc, V_{CE}=1.0Vdc)	30		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			
	(I_C=10mAdc, I_B=1.0mAdc)		0.2	Vdc
	(I_C=50mAdc, I_B=5.0mAdc)		0.3	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			
	(I_C=10mAdc, I_B=1.0mAdc)	0.65	0.85	Vdc
	(I_C=50mAdc, I_B=5.0mAdc)		0.95	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=10mAdc, V_{CE}=20Vdc, f=100MHz)	300		MHz
C_{obo}	Output Capacitance (V_{CB}=5.0Vdec, I_E=0, f=1.0MHz)		4.0	pF
C_{ibo}	Input Capacitance (V_{BE}=0.5Vdc, I_C=0, f=1.0MHz)		8.0	pF
NF	Noise Figure (I_C=100µAdc, V_{CE}=5.0Vdc, R_S=1.0kΩ f=10Hz to 15.7kHz)		5.0	dB

SWITCHING CHARACTERISTICS

Symbol	Parameter	Conditions	Max	Units
t_d	Delay Time	(V_{CC}=3.0Vdc, V_{BE}=0.5Vdc	35	ns
t_r	Rise Time	I_C=10mAdc, I_{B1}=1.0mAdc)	35	ns
t_s	Storage Time	(V_{CC}=3.0Vdc, I_C=10mAdc	200	ns
t_f	Fall Time	I_{B1}=I_{B2}=1.0mAdc)	50	ns

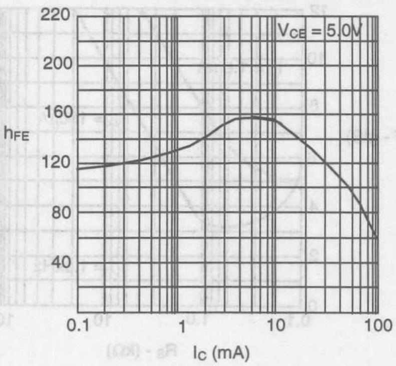
*Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

TO-92

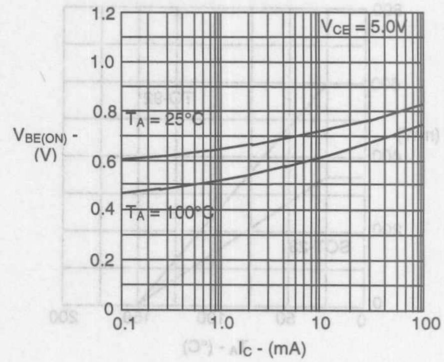


DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

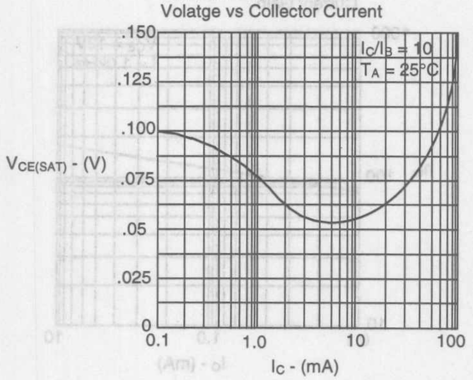
DC Current Gain vs Collector Current



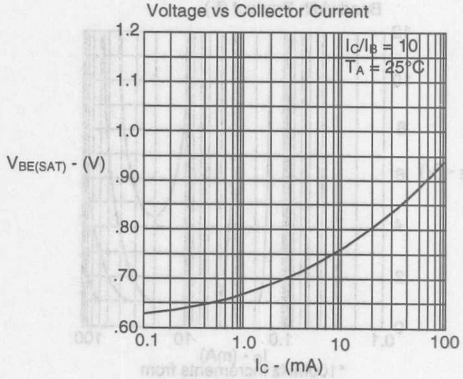
Base-Emitter ON Voltage vs Collector Current



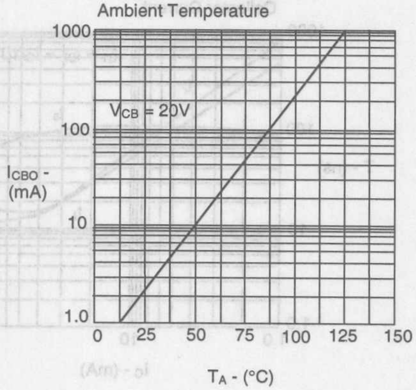
Collector Saturation Volatge vs Collector Current



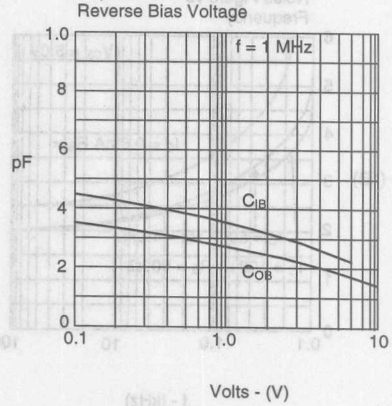
Base Saturation Voltage vs Collector Current



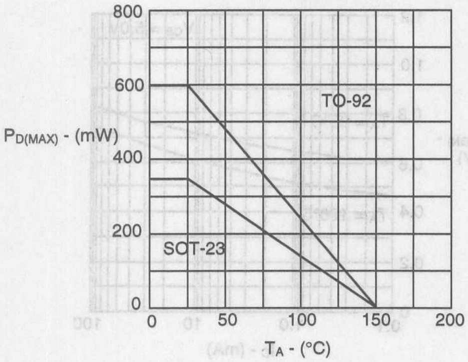
Collector Cutoff Current vs Ambient Temperature



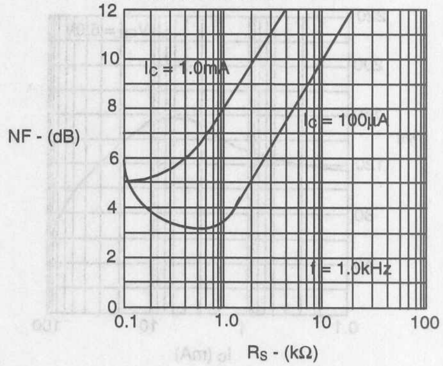
Capacitance vs Reverse Bias Voltage



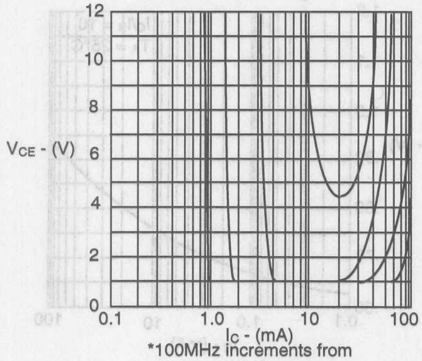
Maximum Power Dissipation vs Ambient Temperature



Noise Figure vs Source Resistance

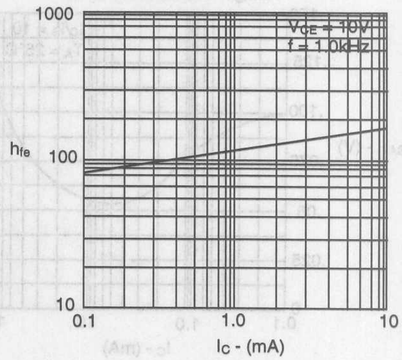


Contours of Constant Gain Bandwidth Product (f_T)

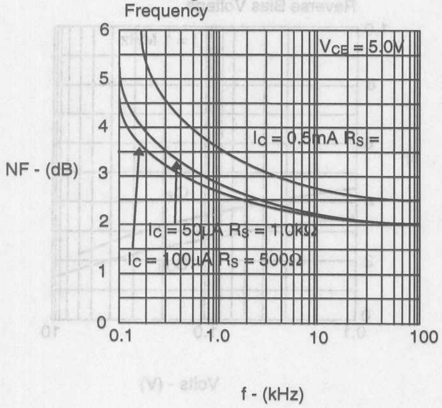


*100MHz increments from 200 to 500MHz

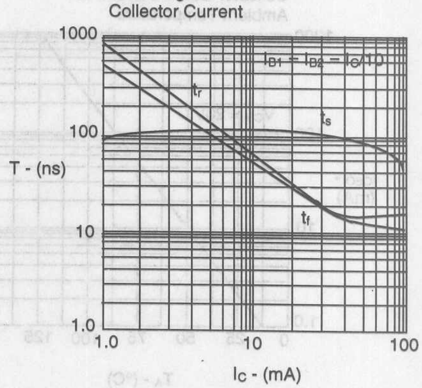
Current Gain



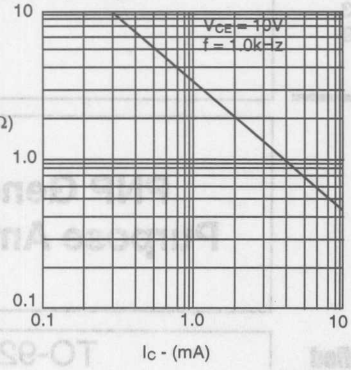
Noise Figure vs Frequency



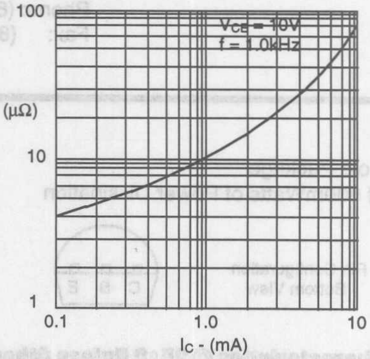
Switching Times vs Collector Current



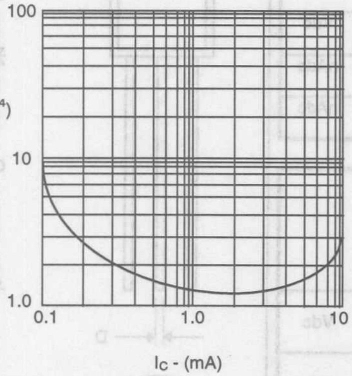
Input Impedance



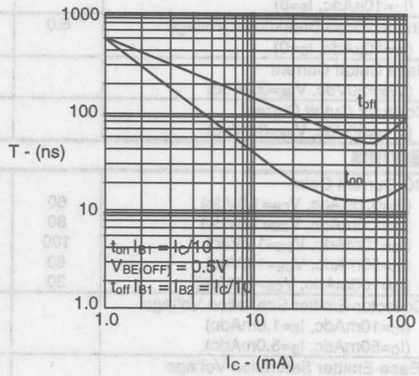
Output Admittance



Voltage Feedback Ratio



Turn On and Turn Off Times vs Collector Current



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2N3906

PNP General Purpose Amplifier

Features

- Through Hole Package
- Capable of 600mWatts of Power Dissipation

Pin Configuration
Bottom View

Electrical Characteristics @ 25°C Unless Otherwise Specified

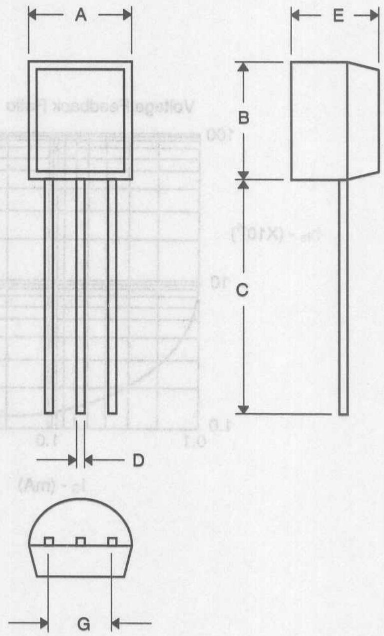
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10μAdc, I_E=0)	40		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10μAdc, I_C=0)	5.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=1.0Vdc)	60		
	(I_C=1.0mAdc, V_{CE}=1.0Vdc)	80		
	(I_C=10mAdc, V_{CE}=1.0Vdc)	100	300	
	(I_C=50mAdc, V_{CE}=1.0Vdc)	60		
	(I_C=100mAdc, V_{CE}=1.0Vdc)	30		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			
	(I_C=10mAdc, I_B=1.0mAdc)		0.25	Vdc
	(I_C=50mAdc, I_B=5.0mAdc)		0.4	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			
	(I_C=10mAdc, I_B=1.0mAdc)	0.65	0.85	Vdc
	(I_C=50mAdc, I_B=5.0mAdc)		0.95	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=10mAdc, V_{CE}=20Vdc, f=100MHz)	250		MHz
C_{obo}	Output Capacitance (V_{CB}=5.0Vdec, I_E=0, f=100MHz)		4.5	pF
C_{ibo}	Input Capacitance (V_{BE}=0.5Vdc, I_C=0, f=100kHz)		10.0	pF
NF	Noise Figure (I_C=100μAdc, V_{CE}=5.0Vdc, R_S=1.0kΩ f=10Hz to 15.7kHz)		4.0	dB

SWITCHING CHARACTERISTICS

Symbol	Parameter	Conditions	Max	Units
t_d	Delay Time	(V_{CC}=3.0Vdc, V_{BE}=0.5Vdc	35	ns
t_r	Rise Time	I_C=10mAdc, I_{B1}=1.0mAdc)	35	ns
t_s	Storage Time	(V_{CC}=3.0Vdc, I_C=10mAdc	225	ns
t_f	Fall Time	I_{B1}=I_{B2}=1.0mAdc)	75	ns

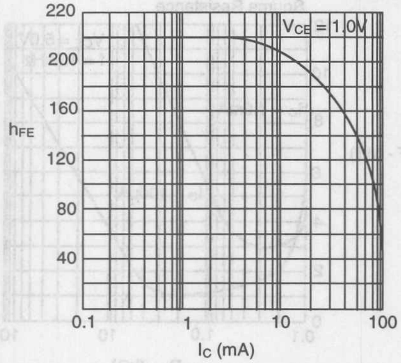
*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

TO-92

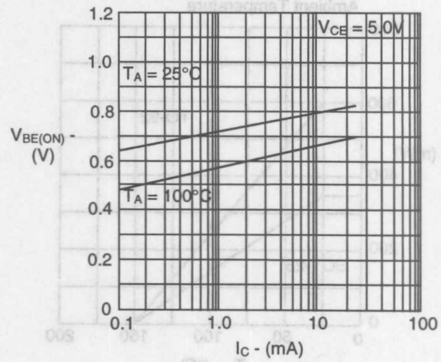


DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

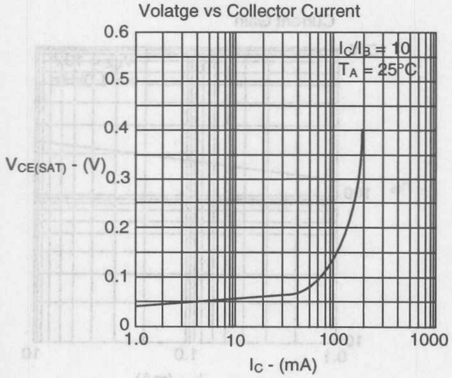
DC Current Gain vs Collector Current



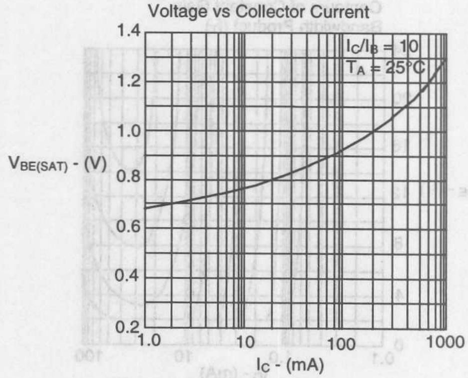
Base-Emitter ON Voltage vs Collector Current



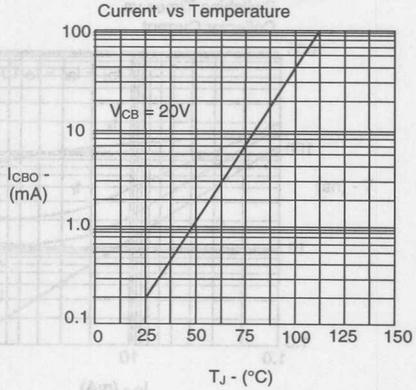
Collector-Emitter Saturation Volatge vs Collector Current



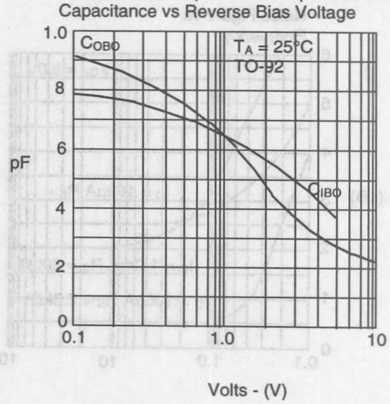
Base-Emitter Saturation Voltage vs Collector Current



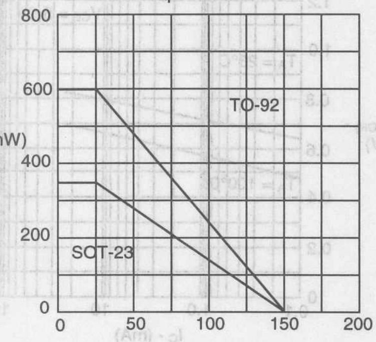
Collector-Base Diode Reverse Current vs Temperature



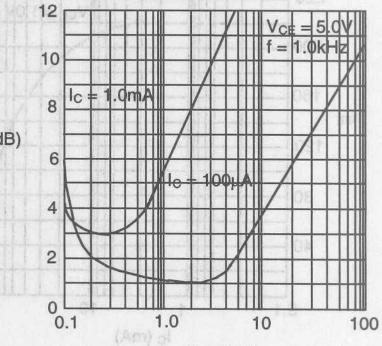
Common Base Open Circuit Input and Output Capacitance vs Reverse Bias Voltage



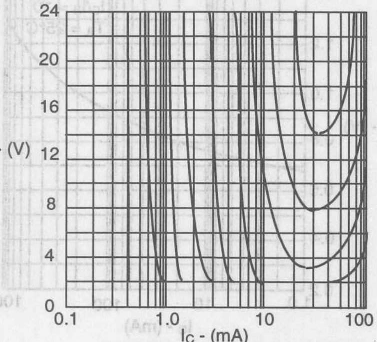
Maximum Power Dissipation vs Ambient Temperature



Noise Figure vs Source Resistance

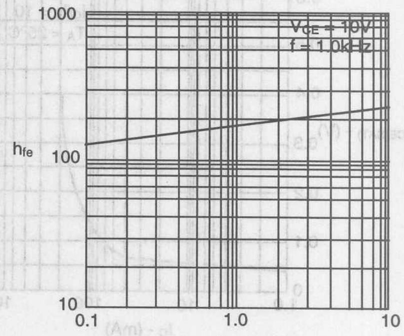


Contours of Constant Gain Bandwidth Product (f_T)

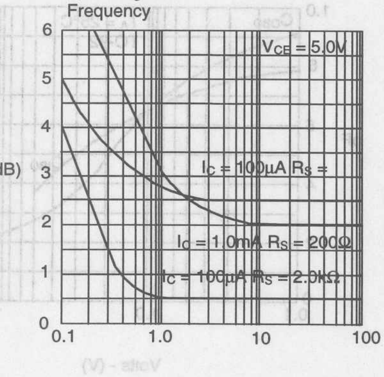


*100MHz increments from 100 to 700, 750 and 800MHz

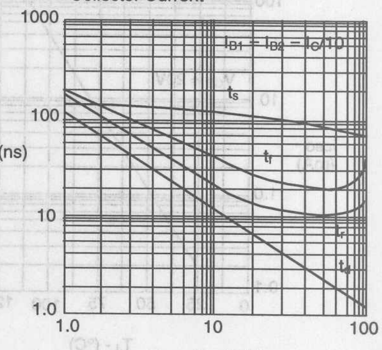
Current Gain



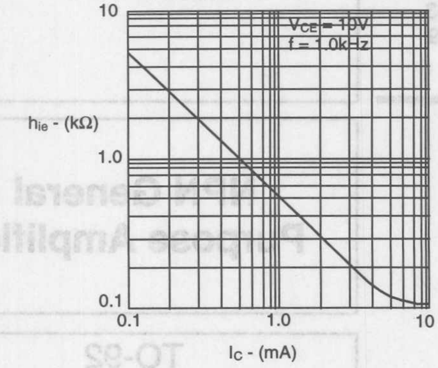
Noise Figure vs Frequency



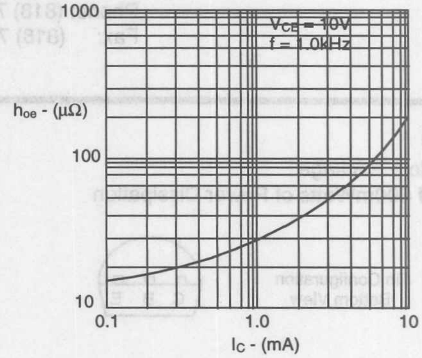
Switching Times vs Collector Current



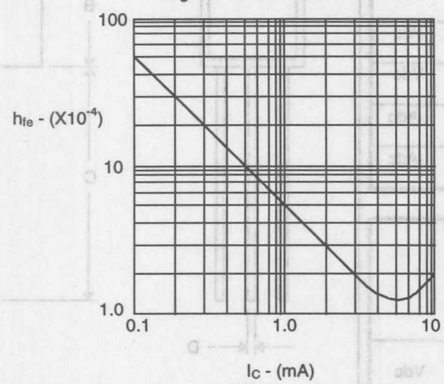
Input Impedance



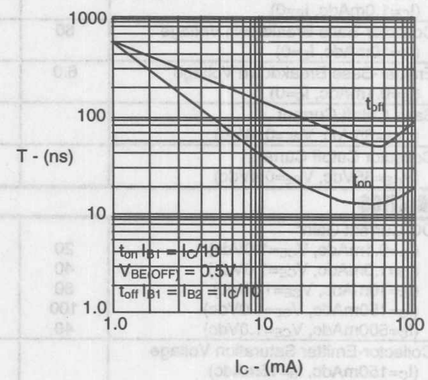
Output Admittance



Voltage Feedback Ratio



Turn On and Turn Off Times vs Collector Current



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Microsemi
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2N4401

NPN General Purpose Amplifier

Features

- Through Hole Package
- Capable of 600mWatts of Power Dissipation

Pin Configuration
Bottom View

Electrical Characteristics @ 25 °C Unless Otherwise Specified

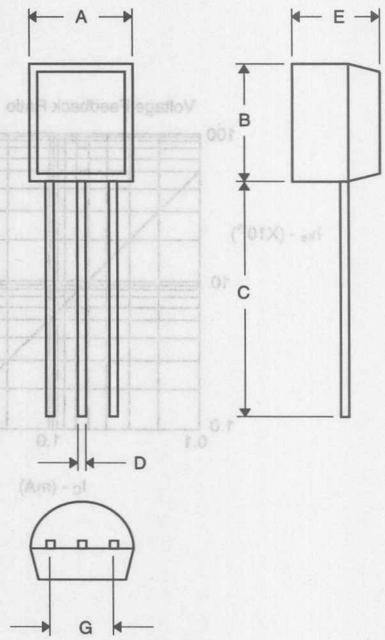
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10mAdc, I_E=0)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=0.1mAdc, I_C=0)	6.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=35Vdc, V_{BE}=0.4Vdc)		0.1	µAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=35Vdc, V_{BE}=0.4Vdc)		0.1	µAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=1.0Vdc)	20		
	(I_C=1.0mAdc, V_{CE}=1.0Vdc)	40		
	(I_C=10mAdc, V_{CE}=1.0Vdc)	80	300	
	(I_C=150mAdc, V_{CE}=1.0Vdc)	100		
	(I_C=500mAdc, V_{CE}=1.0Vdc)	40		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			
	(I_C=150mAdc, I_B=15mAdc)		0.4	Vdc
	(I_C=500mAdc, I_B=50mAdc)		0.75	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			
	(I_C=150mAdc, I_B=15mAdc)	0.75	0.95	Vdc
	(I_C=500mAdc, I_B=50mAdc)		1.2	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=20mAdc, V_{CE}=10Vdc, f=100MHz)	250		MHz
C_{cb}	Collector-Base Capacitance (V_{CB}=5.0Vdc, I_E=0, f=100kHz)		6.5	pF
C_{eb}	Emitter-Base Capacitance (V_{BE}=0.5Vdc, I_C=0, f=100kHz)		30.0	pF

SWITCHING CHARACTERISTICS

t_d	Delay Time	(V_{CC}=30Vdc, V_{BE}=0.2Vdc	15	ns
t_r	Rise Time	I_C=150mAdc, I_{B1}=15mAdc)	20	ns
t_s	Storage Time	(V_{CC}=30Vdc, I_C=150mAdc	225	ns
t_f	Fall Time	I_{B1}=I_{B2}=15mAdc)	30	ns

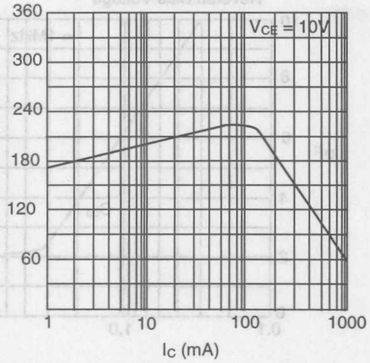
*Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

TO-92

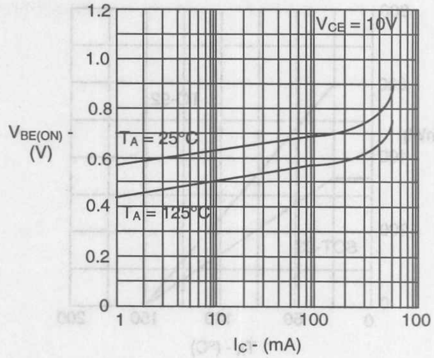


DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

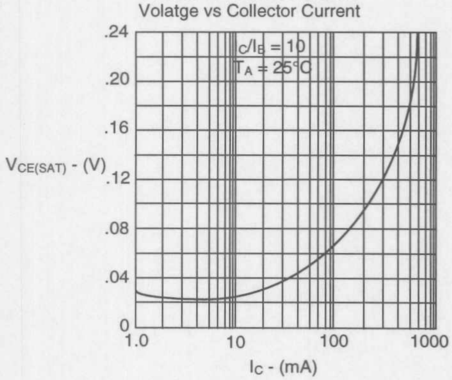
DC Current Gain vs Collector Current



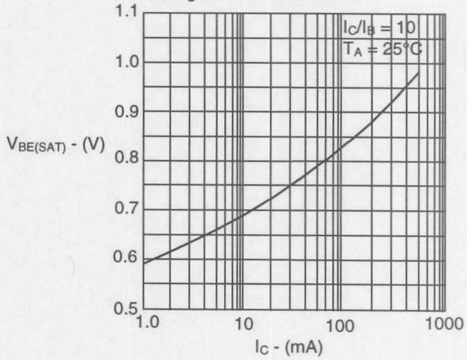
Base-Emitter ON Voltage vs Collector Current



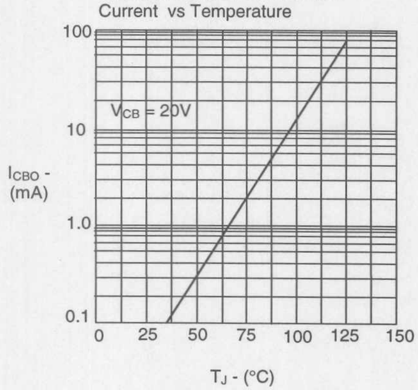
Collector-Emitter Saturation Volatge vs Collector Current



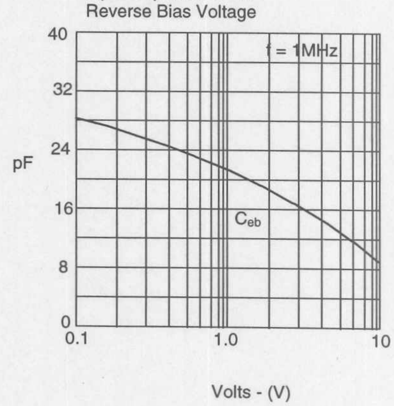
Base-Emitter Saturation Voltage vs Collector Current

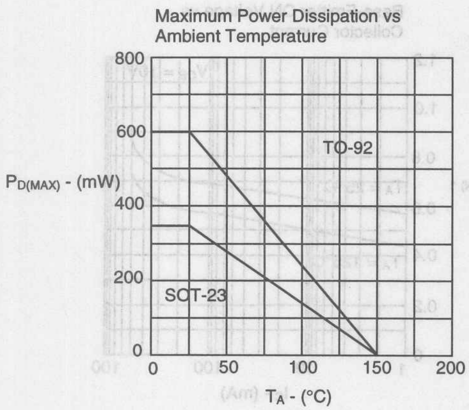


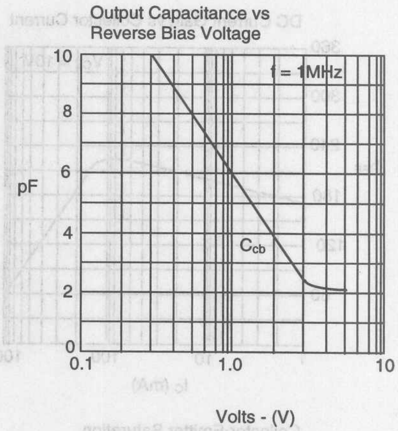
Collector-Base Diode Reverse Current vs Temperature



Input Capacitance vs Reverse Bias Voltage




Maximum Power Dissipation vs Ambient Temperature
800
600
400
200
0
PD(MAX) - (mW)
TO-92
SOT-23
0
50
100
150
200
TA - (°C)


Output Capacitance vs Reverse Bias Voltage
10
8
6
4
2
0
pF
f = 1MHz
Ccb
0.1
1.0
10
Volts - (V)

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2N4403

PNP General Purpose Amplifier

Features

- Through Hole Package
- Capable of 600mWatts of Power Dissipation

Pin Configuration
Bottom View

Electrical Characteristics @ 25°C Unless Otherwise Specified

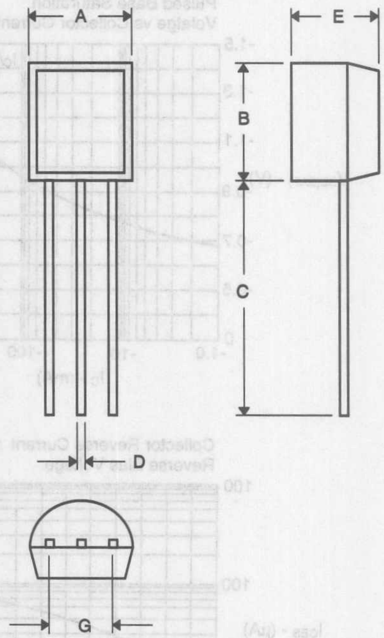
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10μAdc, I_E=0)	40		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10μAdc, I_C=0)	5.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		0.1	μAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		0.1	μAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=1.0Vdc)	30		
	(I_C=1.0mAdc, V_{CE}=1.0Vdc)	60		
	(I_C=10mAdc, V_{CE}=1.0Vdc)	100	300	
	(I_C=150mAdc, V_{CE}=2.0Vdc)	100		
	(I_C=500mAdc, V_{CE}=2.0Vdc)	20		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			
	(I_C=150mAdc, I_B=15mAdc)		0.4	Vdc
	(I_C=500mAdc, I_B=50mAdc)		0.75	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			
	(I_C=150mAdc, I_B=15mAdc)	0.75	0.95	Vdc
	(I_C=500mAdc, I_B=50mAdc)		1.30	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=20mAdc, V_{CE}=10Vdc, f=100MHz)	200		MHz
C_{cb}	Output Capacitance (V_{CB}=10Vdc, I_E=0, f=140kHz)		8.5	pF
C_{eb}	Input Capacitance (V_{EB}=0.5Vdc, I_C=0, f=140kHz)		30.0	pF

SWITCHING CHARACTERISTICS

Symbol	Parameter	Conditions	Max	Units
t_d	Delay Time	(V_{CC}=3.0Vdc, V_{BE}=2.0Vdc	15	ns
t_r	Rise Time	I_C=150mAdc, I_{B1}=15mAdc)	20	ns
t_s	Storage Time	(V_{CC}=3.0Vdc, I_C=150mAdc	225	ns
t_f	Fall Time	I_{B1}=I_{B2}=15mAdc)	30	ns

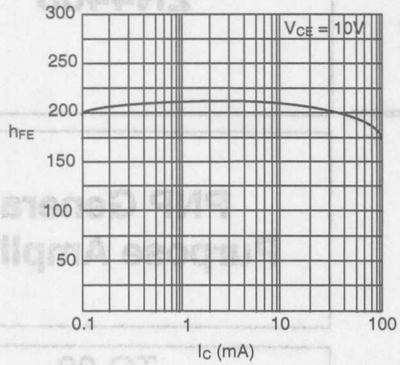
*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

TO-92

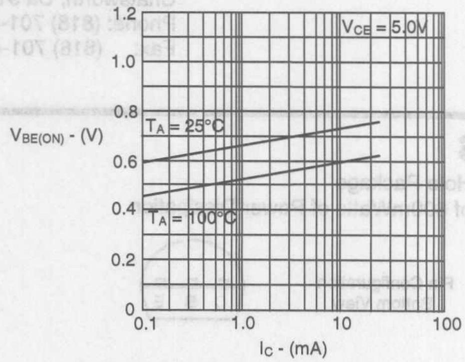


DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

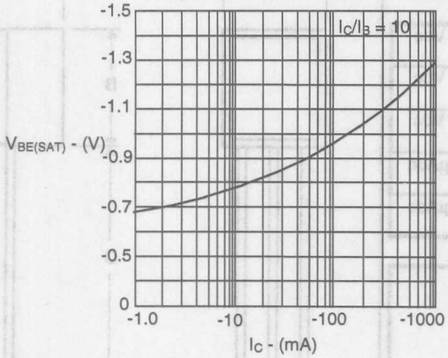
DC Current Gain vs Collector Current



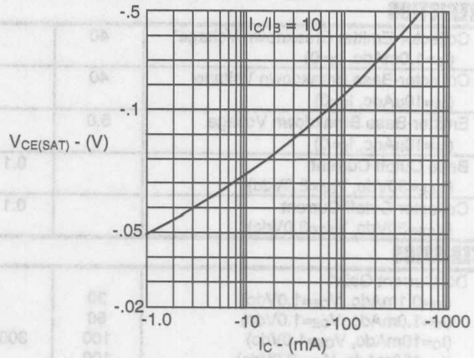
Base-Emitter ON Voltage vs Collector Current



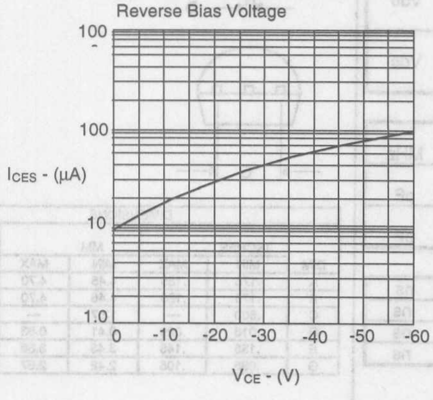
Pulsed Base Saturation Volatge vs Collector Current



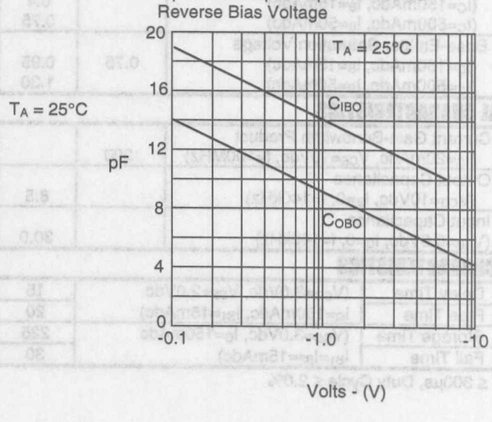
Pulsed Collector Saturation Voltage vs Collector Current



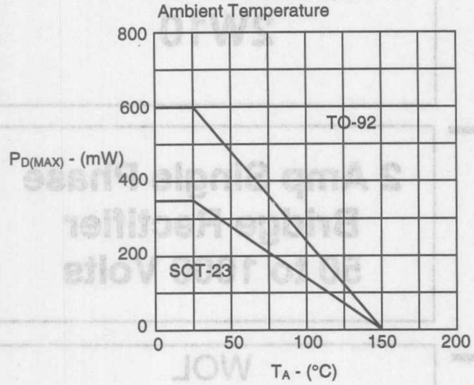
Collector Reverse Current vs Reverse Bias Voltage



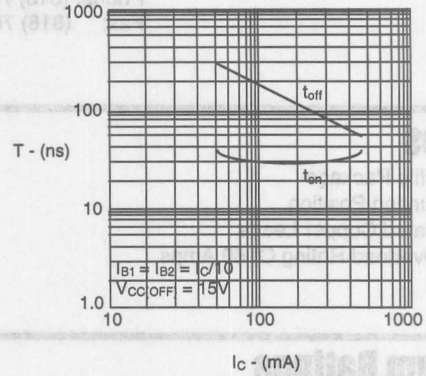
Input and Output Capacitances vs Reverse Bias Voltage



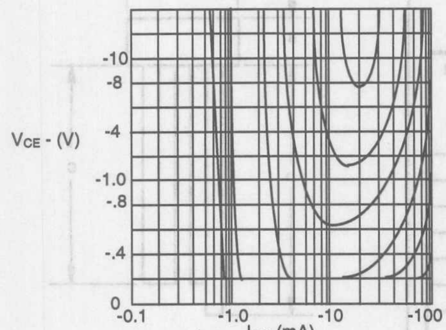
Maximum Power Dissipation vs Ambient Temperature



Turn On and Turn Off Times vs Collector Current

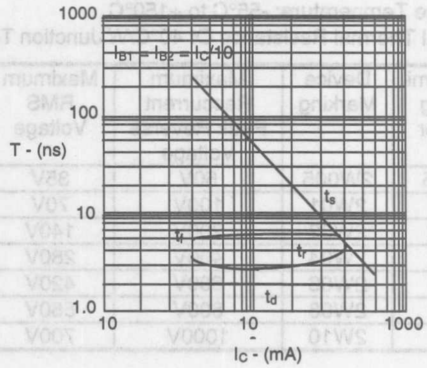


Contours of Constant Gain Bandwidth Product (f_T)



*25MHz increments from 50 to 200MHz

Switching Times vs Collector Current



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2W005 THRU 2W10

2 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Low Profile Package
- Any Mounting Position
- Silver Plated Copper Leads
- Surge Overload Rating Of 60 Amps

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance Of 40°C/W Junction To Ambient

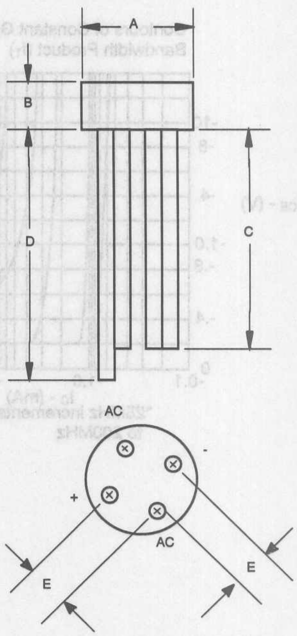
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
2W005	2W005	50V	35V	50V
2W01	2W01	100V	70V	100V
2W02	2W02	200V	140V	200V
2W04	2W04	400V	280V	400V
2W06	2W06	600V	420V	600V
2W08	2W08	800V	560V	800V
2W10	2W10	1000V	700V	1000v

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2.0A	$T_J = 25°C$
Peak Forward Surge Current	I_{FSM}	60A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 2.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 1mA	$T_J = 25°C$ $T_J = 100°C$

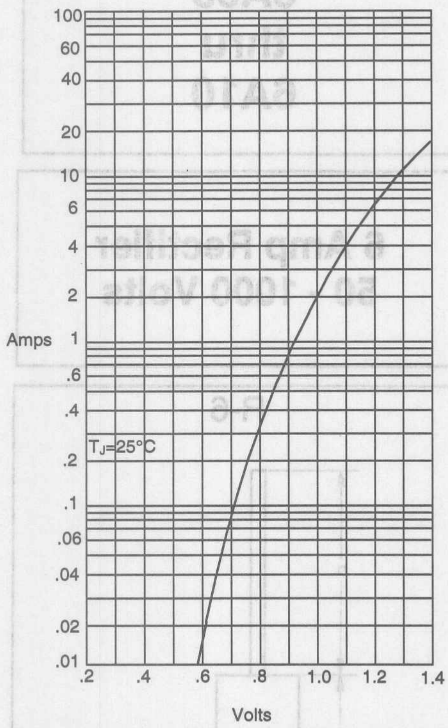
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

WOL



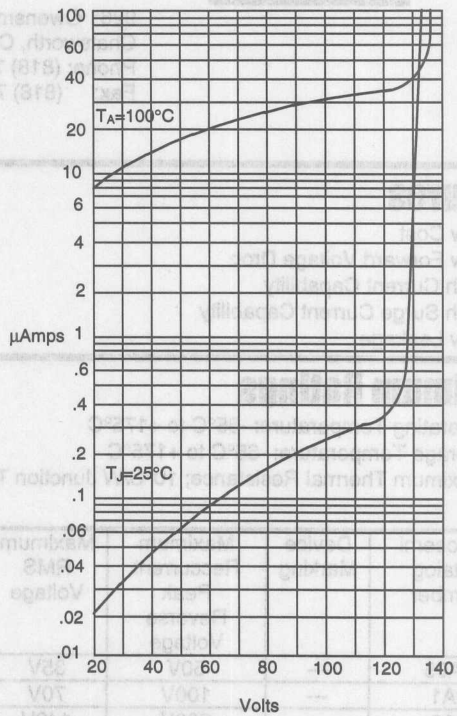
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.378	---	9.60	
B	---	.280	---	7.10	
C	1.000	---	25.40	---	
D	1.200	---	30.50	---	
E	.180	.220	4.60	5.60	

Figure 1
Typical Forward Characteristics



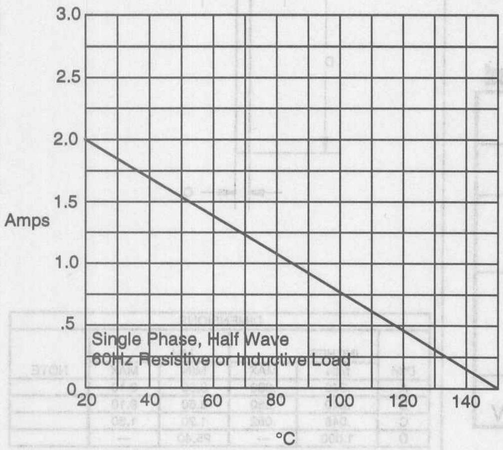
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



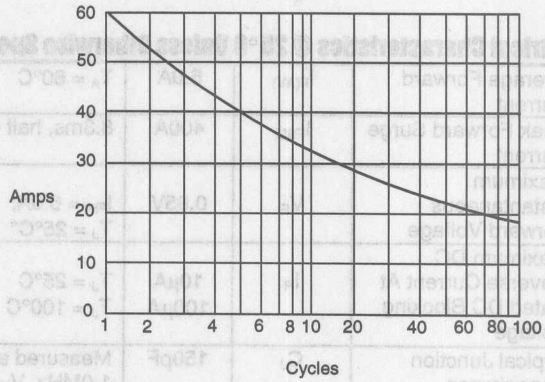
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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6A05
thru
6A10

6 Amp Rectifier
50 - 1000 Volts

Features

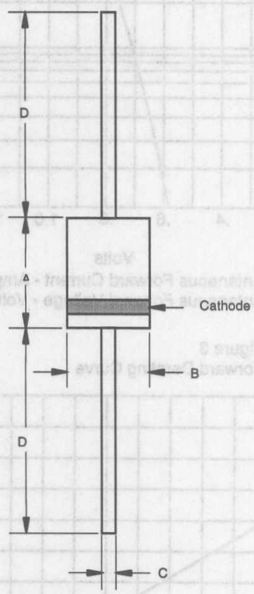
- Low Cost
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Low Leakage

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 10°C/W Junction To Ambient

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
6A05	---	50V	35V	50V
6A1	---	100V	70V	100V
6A2	---	200V	140V	200V
6A4	---	400V	280V	400V
6A6	---	600V	420V	600V
6A8	---	800V	560V	800V
6A10	---	1000V	700V	1000V

R-6



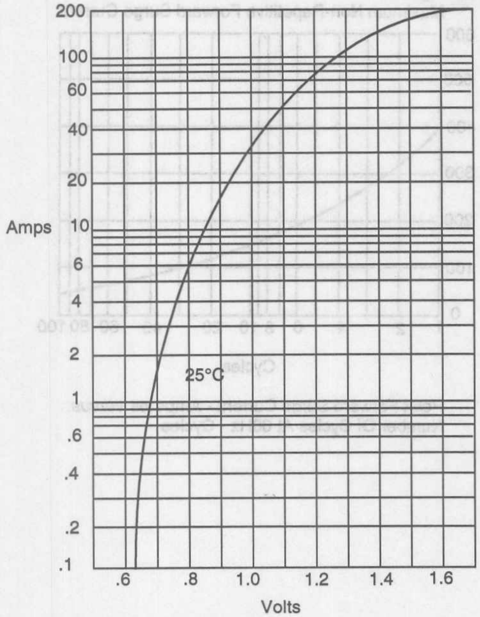
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.340	.360	8.60	9.10	
B	.340	.360	8.60	9.10	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6.0A	$T_A = 60°C$
Peak Forward Surge Current	I_{FSM}	400A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	0.95V	$I_{FM} = 6.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 100µA	$T_J = 25°C$ $T_J = 100°C$
Typical Junction Capacitance	C_J	150pF	Measured at 1.0MHz, V_R=4.0V

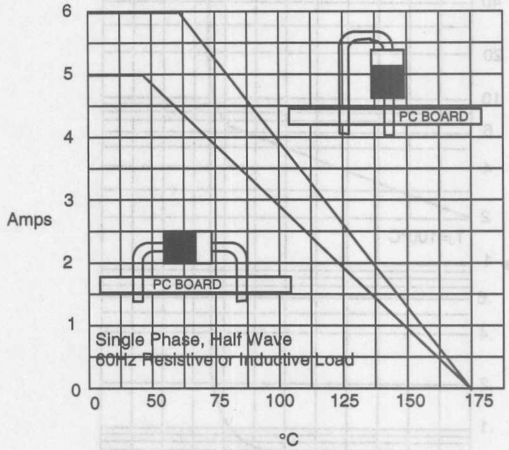
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

Figure 1
Typical Forward Characteristics



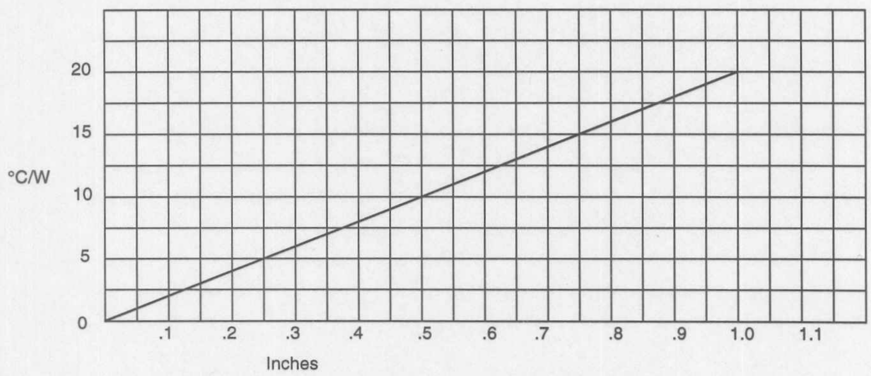
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



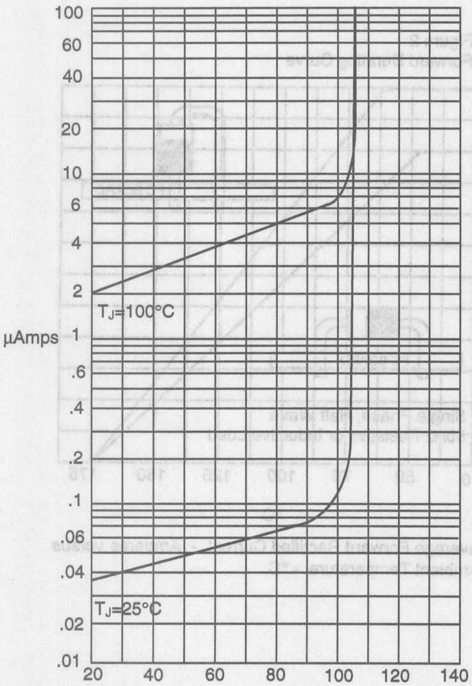
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Typical Thermal Resistance versus Lead Length



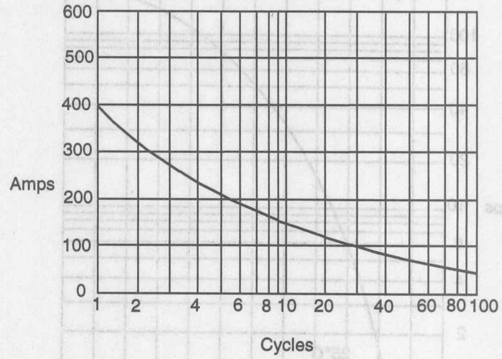
Thermal Resistance - °C/W *versus*
Equal Lead Length To Heat Sink - Inches

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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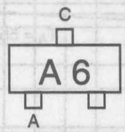
BAS16

300mW 75Volt Switching Diode

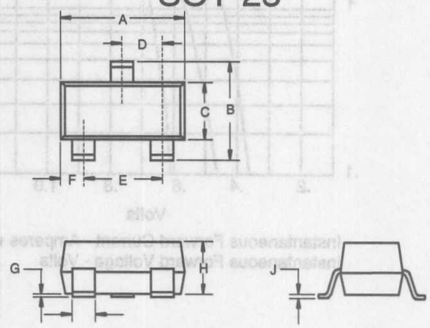
Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package

Pin Configuration
Top View

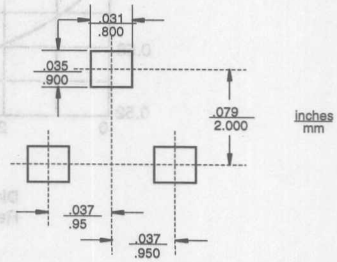


SOT-23



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder
Pad Layout



Maximum Ratings

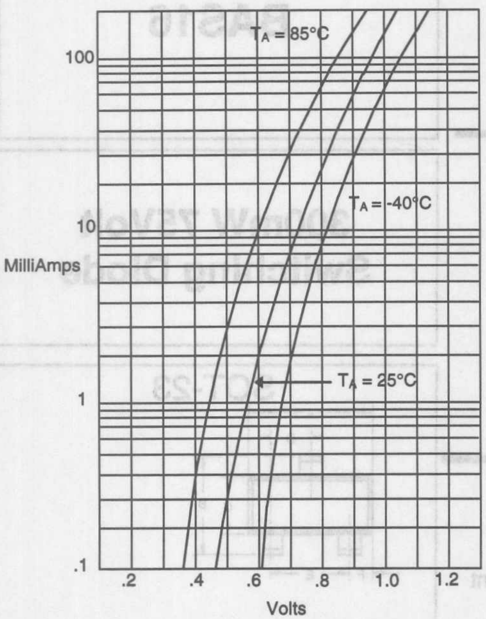
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 556°C/W Junction To Ambient

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	85V	
Peak Forward Current	I_F	200mA	
Power Dissipation	P_{TOT}	300mW	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	855mV	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	1µA 50µA	V_R=75Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	2pF	Measured at 1.0MHz, V_R=0V
Reverse Recovery Time	T_{rr}	6nS	I_F=10mA V_R = 0V R_L=500Ω

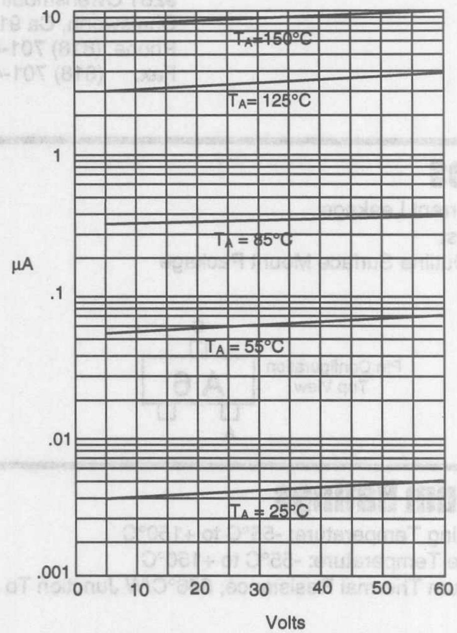
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

Figure 1
Typical Forward Characteristics



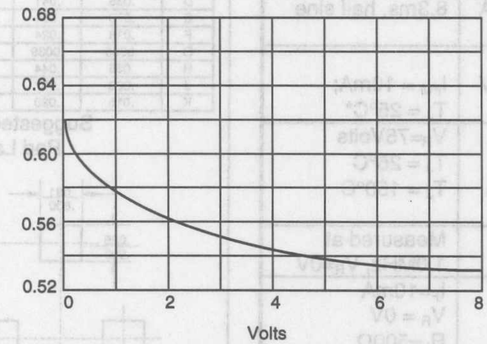
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



Instantaneous Reverse Current - MicroAmperes *versus*
Reverse Voltage - Volts

Figure 3
Diode Capacitance



Diode Capacitance - pF *versus*
Reverse Voltage - Volts

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BAT54 thru BAT54S

230mWatt, 30Volt Schottky Barrier Diode

Features

- Low Forward Voltage
- Surface Mount SOT-23 Package
- Capable of 230mWatts of Power Dissipation

Microsemi Catalog Number	Device Marking	Type	Pin Configuration
BAT54	L4P	Single	Figure 1
BAT54A	---	Dual	Figure 2
BAT54C	---	Dual	Figure 3
BAT54S	---	Dual	Figure 4

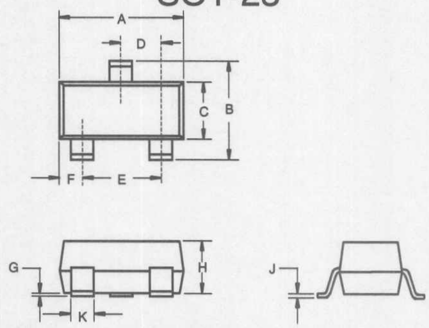
Maximum Ratings

Continuos Reverse Voltage	V_R	30V
Repetitive Peak Forward Current	I_{FRM}	300mA
Non-Repetitive Peak Forward Current t<1s	I_{FSM}	600mA
Total Power Dissipation @ T_A = 25°C	P_D	230mW
Storage Temperature Range	T_{stg}	-55°C to 150°C
Junction Temperature	T_j	125°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

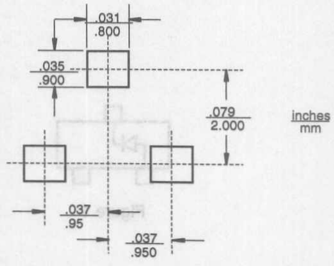
Ratings	Symbol	Max.	Notes
Forward Voltage at I_F = 0.1mA I_F = 1mA I_F = 10mA I_F = 30mA I_F = 100mA	V_F	 240mV 320mV 400mV 500mV 1000mV	
Reverse Current	I_R	30A	V_R = 25V
Reverse Breakdown Voltage	$V_{(BR)}$	>30V	
Capacitance	C_J	16pF	Measured at 1.0MHz, V_R=1.0V
Reverse Recovery Time	t_{rr}	5nS	I_F=I_R=10mA; $I_{(REC)}$ = 1mA
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	160°C/W	

SOT-23



DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



Pin Configuration - Top View

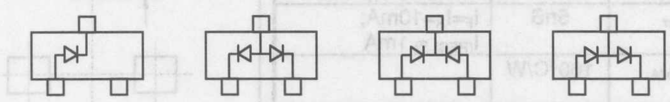


Figure 1 Figure 2 Figure 3 Figure 4

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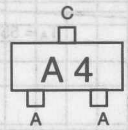
BAV70

300mW 70Volt Dual Switching Diode

Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package

Pin Configuration
Top View



Maximum Ratings

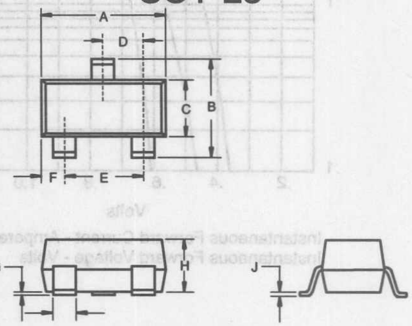
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 417°C/W Junction To Ambient

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	70V	
Peak Forward Current	I_F	200mA	
Power Dissipation	P_{TOT}	300mW	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	855mV	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	2.5µA 100µA	V_R=70Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	1.5pF	Measured at 1.0MHz, V_R=0V
Reverse Recovery Time	T_{rr}	6nS	I_F=10mA V_R = 0V R_L=500Ω

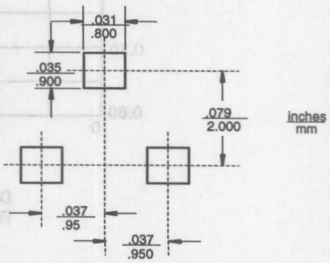
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

SOT-23



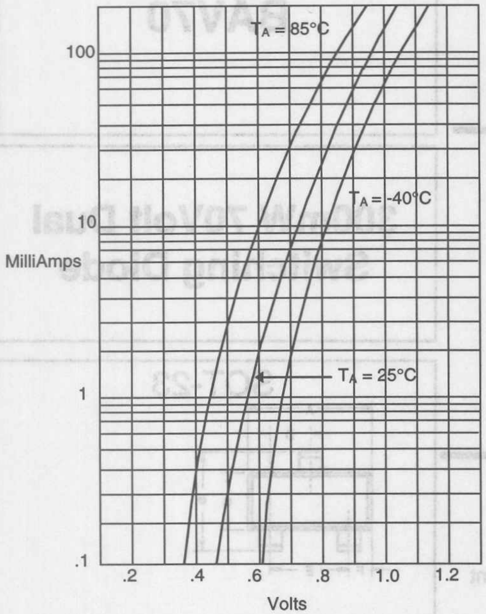
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



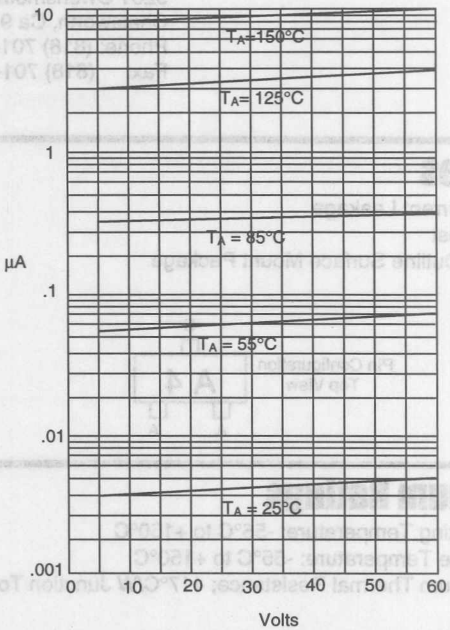
BAV70

Figure 1
Typical Forward Characteristics



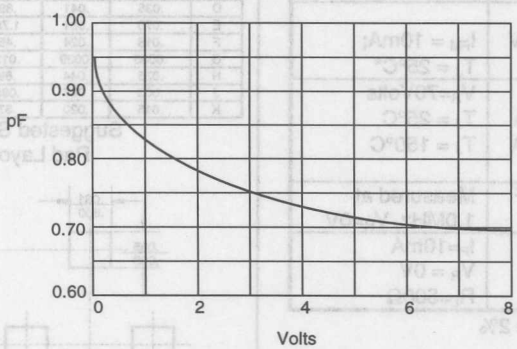
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



Instantaneous Reverse Current - MicroAmperes *versus*
Reverse Voltage - Volts

Figure 3
Diode Capacitance



Diode Capacitance - pF *versus*
Reverse Voltage - Volts

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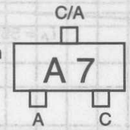
BAV99

300mW 70Volt Dual Series Switching Diode

Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package

Pin Configuration
Top View



Maximum Ratings

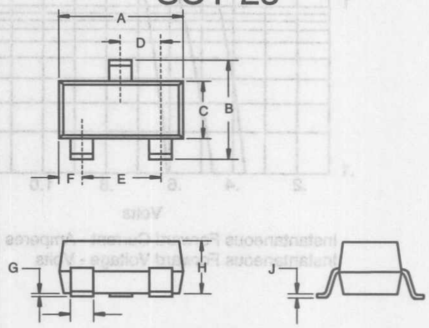
- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 417°C/W Junction To Ambient

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Reverse Voltage	V_R	70V	
Peak Forward Current	I_F	215mA	
Power Dissipation	P_{TOT}	300mW	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	855mV	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	2.5µA 50µA	V_R=70Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	1.5pF	Measured at 1.0MHz, V_R=0V
Reverse Recovery Time	T_{rr}	6nS	I_F=10mA V_R = 0V R_L=500Ω

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

SOT-23



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder
Pad Layout

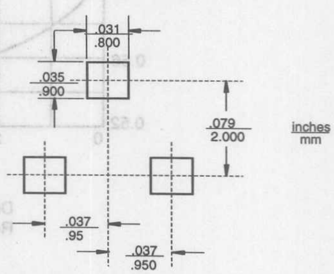
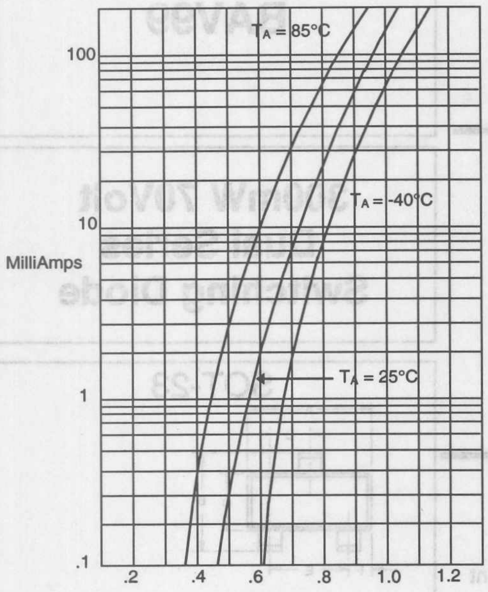
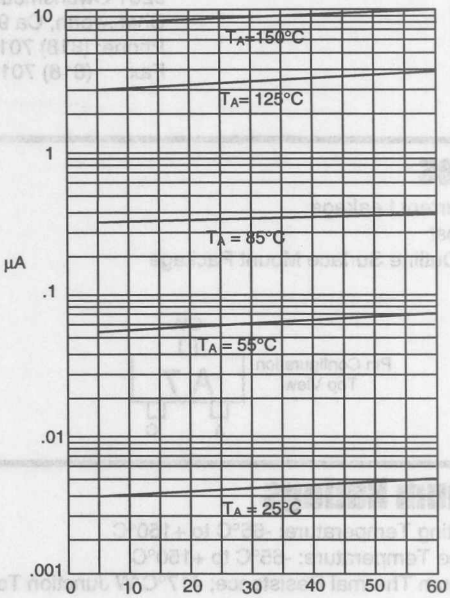


Figure 1
Typical Forward Characteristics



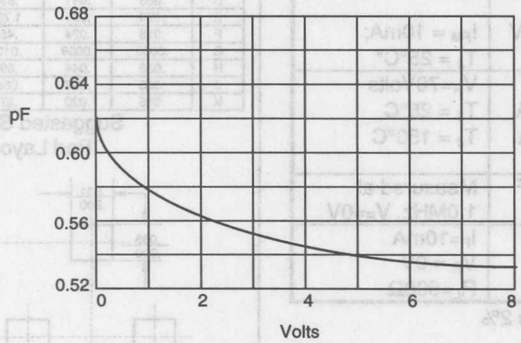
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Typical Reverse Characteristics



Instantaneous Reverse Current - MicroAmperes *versus*
Reverse Voltage - Volts

Figure 3
Diode Capacitance



Diode Capacitance - pF *versus*
Reverse Voltage - Volts

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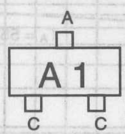
BAW56

300mW 70Volt Dual Switching Diode

Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package

Pin Configuration
Top View



Maximum Ratings

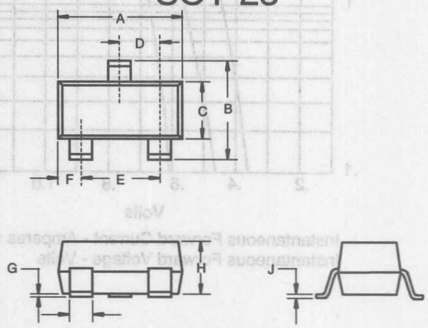
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 417°C/W Junction To Ambient

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Reverse Voltage	V_R	70V	
Peak Forward Current	I_F	200mA	
Power Dissipation	P_{TOT}	300mW	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	855mV	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	2.5µA 50µA	V_R=70Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	2pF	Measured at 1.0MHz, V_R=0V
Reverse Recovery Time	T_{rr}	6nS	I_F=10mA V_R = 0V R_L=500Ω

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

SOT-23



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

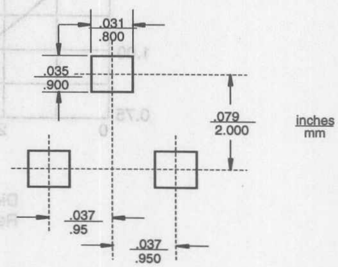
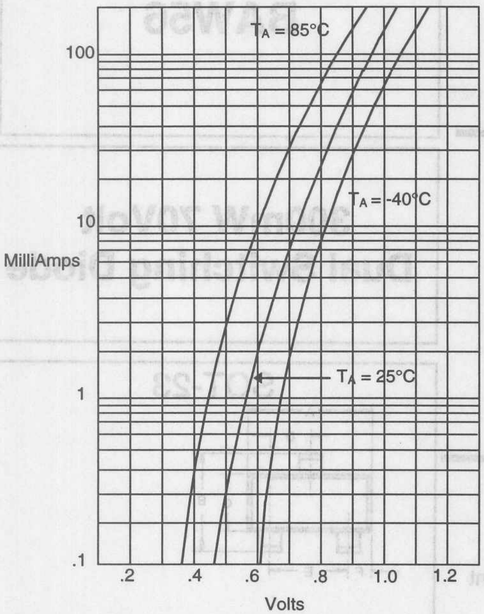
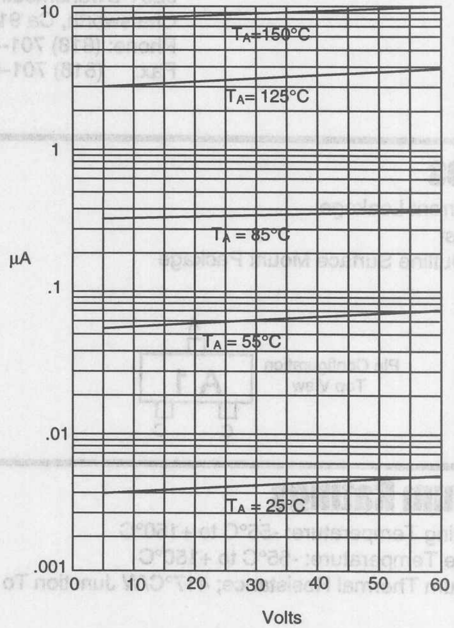


Figure 1
Typical Forward Characteristics



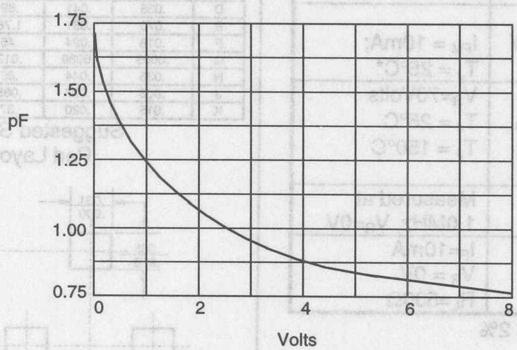
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



Instantaneous Reverse Current - MicroAmperes *versus*
Reverse Voltage - Volts

Figure 3
Diode Capacitance



Diode Capacitance - pF *versus*
Reverse Voltage - Volts

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BR805DL THRU BR810DL

2 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Plastic Case
- Any Mounting Position
- Surge Rating Of 60 Amps
- Low Forward Voltage Drop

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

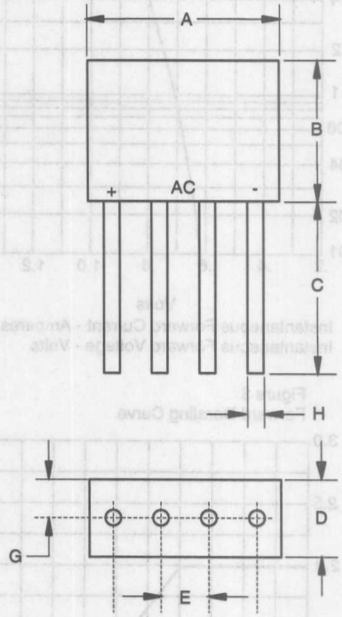
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
BR805DL	BR805DL	50V	35V	50V
BR81DL	BR81DL	100V	70V	100V
BR82DL	BR82DL	200V	140V	200V
BR84DL	BR84DL	400V	280V	400V
BR86DL	BR86DL	600V	420V	600V
BR88DL	BR88DL	800V	560V	800V
BR810DL	BR810DL	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2.0A	$T_C = 50°C$
Peak Forward Surge Current	I_{FSM}	60A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 2.0A$ per element; $T_A = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 µsec, Duty cycle 1%

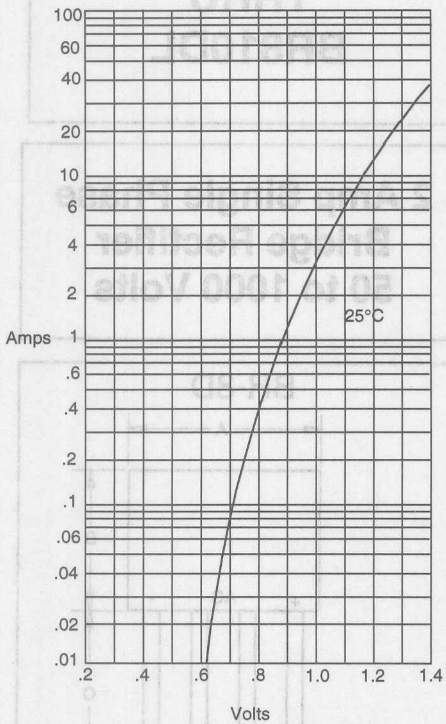
BR-8D



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.693	---	17.54	
B	---	.504	---	12.80	
C	---	.750	---	19.00	
D	.245	.255	6.20	6.45	
E	.15	---	3.8	---	3PL/TYP
G	.125	---	3.20	---	TYP
H	.030	---	.76	---	

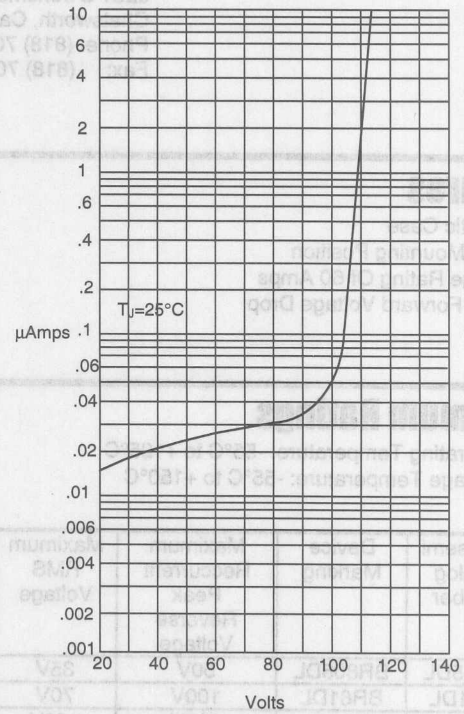
BR805DL thru BR810DL

Figure 1
Typical Forward Characteristics



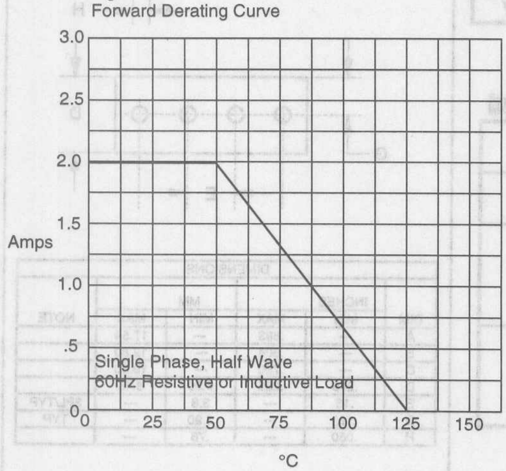
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



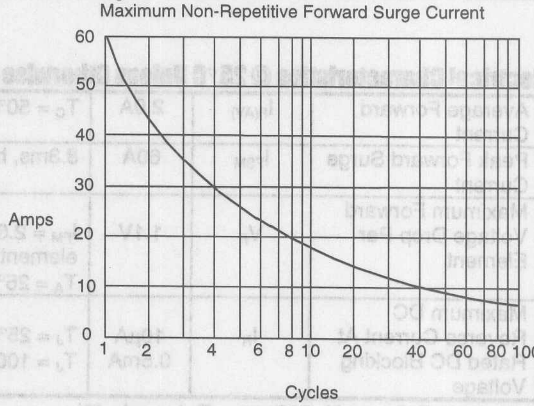
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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DB101 THRU DB107

1 Amp Single Phase Glass Passivated Bridge Rectifier 50 to 1000 Volts

Features

- Through Hole Package
- Glass Passivated Diode Construction
- Moisture Resistant Epoxy Case
- High Surge Current Capability

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

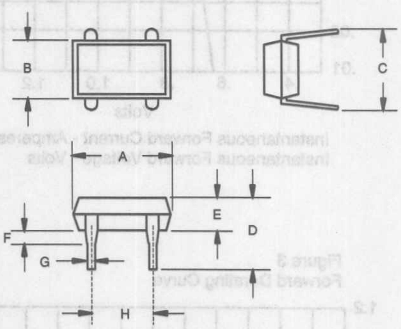
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DB101	---	50V	35V	50V
DB102	---	100V	70V	100V
DB103	---	200V	140V	200V
DB104	---	400V	280V	400V
DB105	---	600V	420V	600V
DB106	---	800V	560V	800V
DB107	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 40°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM} = 1.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.5mA	$T_A = 25°C$ $T_A = 125°C$
Maximum Reverse Recovery Time	T_{rr}	36ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	25pF	Measured at 1.0MHz, V_R=4.0V

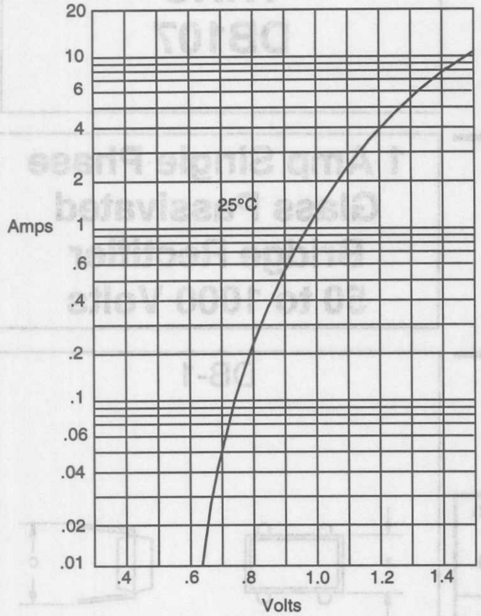
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

DB-1



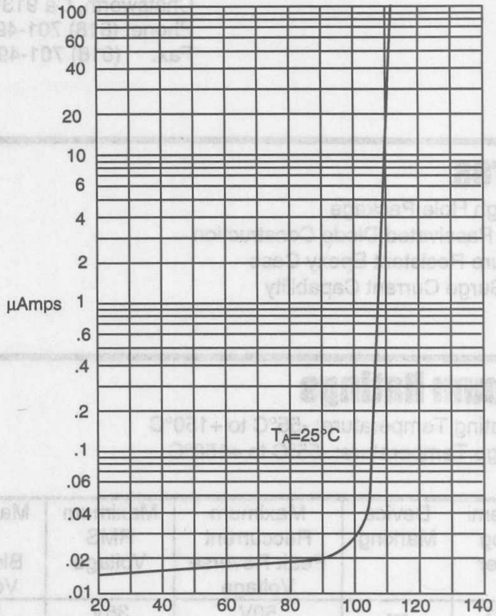
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.355	.365	9.00	9.30	
B	.245	.255	6.20	6.60	
C	.300	.350	7.60	8.90	
D	.155	.165	3.90	4.20	
E	.115	.135	2.90	3.40	
F	---	.060	---	1.50	
G	---	.020	---	.50	
H	.195	.205	5.00	5.20	

Figure 1
Typical Forward Characteristics



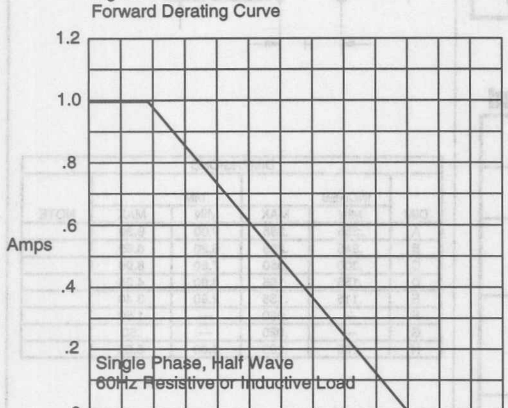
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



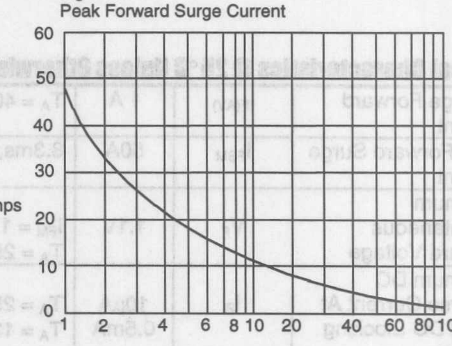
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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DL4001 thru DL4007

1 Amp Glass Passivated Rectifier 50 - 1000 Volts

Features

- Glass Passivated Junction
- Low Current Leakage
- Metalurgically Bonded Construction
- Surface Mount Applications

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 20°C/W Junction To Lead

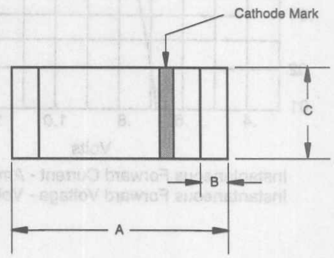
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DL4001	---	50V	35V	50V
DL4002	---	100V	70V	100V
DL4003	---	200V	140V	200V
DL4004	---	400V	280V	400V
DL4005	---	600V	420V	600V
DL4006	---	800V	560V	800V
DL4007	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	$T_J = 25°C$ $T_J = 125°C$
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

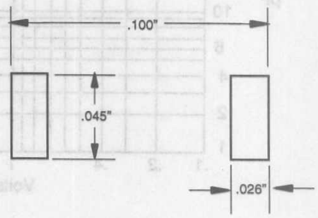
*Pulse test: Pulse width 300 μsec, Duty cycle 2%

MELF



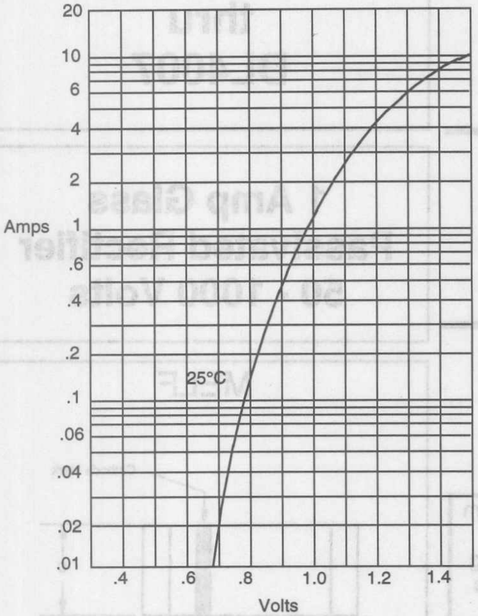
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.190	.205	4.80	5.20	
B	---	.022	---	.55	Nominal
C	.095	.099	2.40	2.50	Ø

SUGGESTED SOLDER PAD LAYOUT



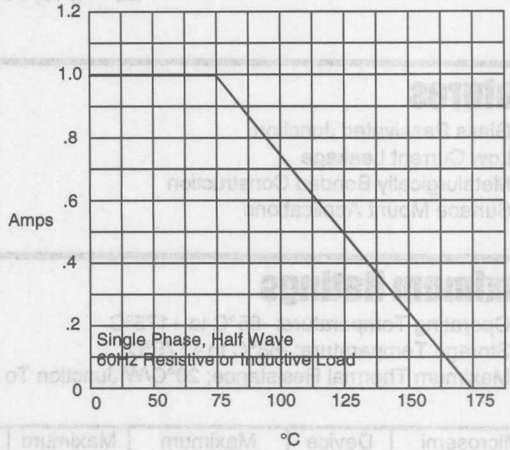
DL4001 thru DL4007

Figure 1
Typical Forward Characteristics



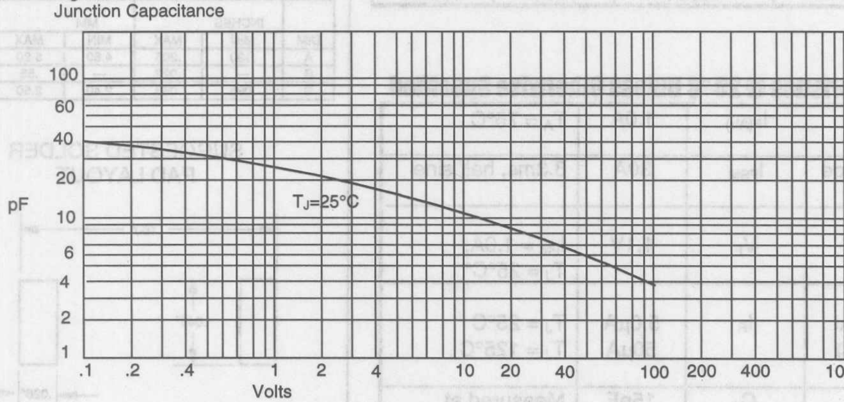
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



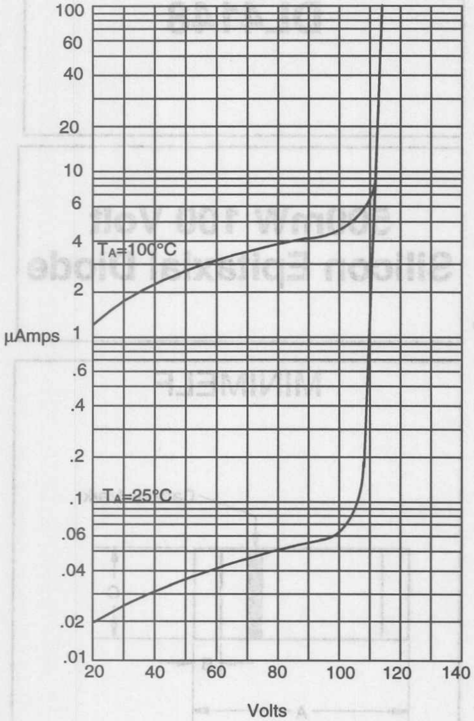
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



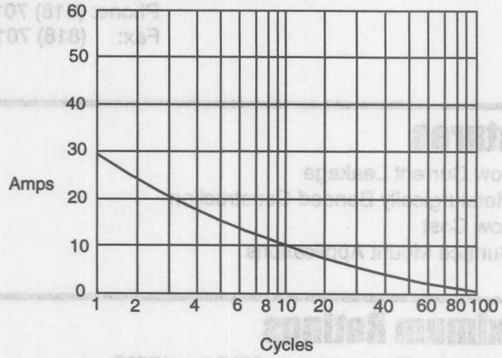
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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DL4148

500mW 100 Volt Silicon Epitaxial Diode

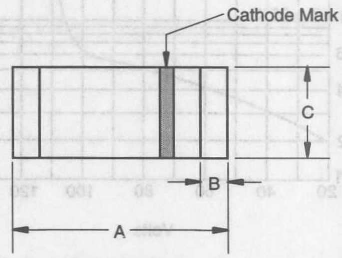
Features

- Low Current Leakage
- Metallurgically Bonded Construction
- Low Cost
- Surface Mount Applications

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 35°C/W Junction To Ambient

MINIMELF



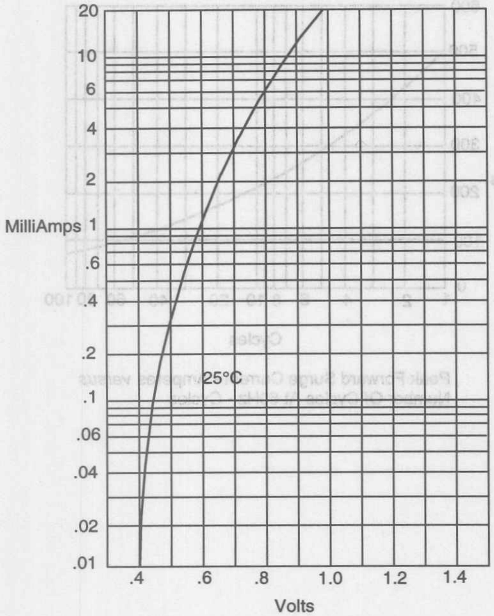
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.134	.142	3.40	3.60	
B	.008	.016	.20	.40	
C	.055	.059	1.40	1.50	Ø

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_O	150mA	Resistive Load f > 50Hz
Power Dissipation	P_{TOT}	500mW	
Junction Temperature	T_J	200°C	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 50µA	V_R=20Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	4pF	Measured at 1.0MHz, V_R=4.0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 6V R_L=100Ω

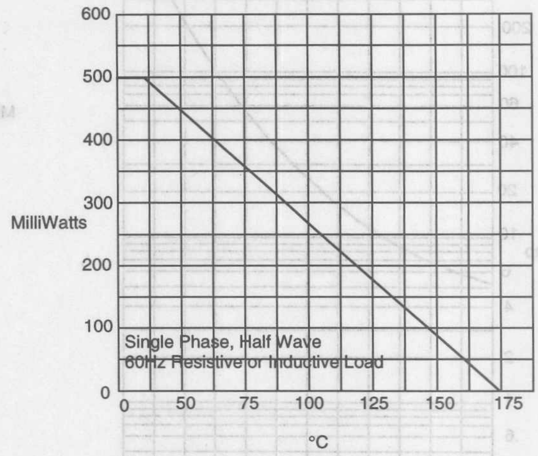
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

Figure 1
Typical Forward Characteristics



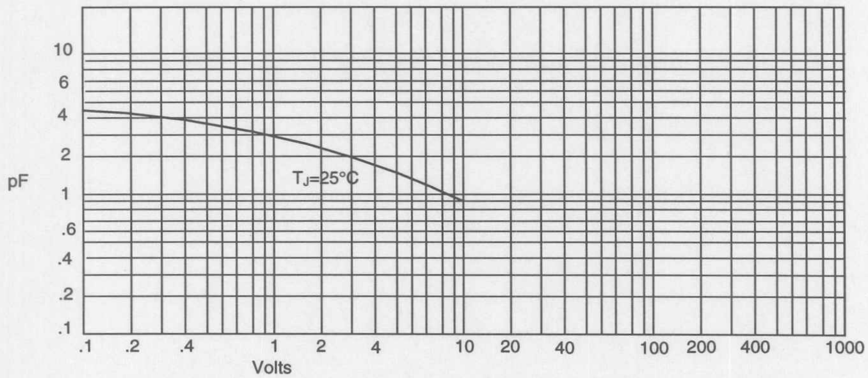
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve

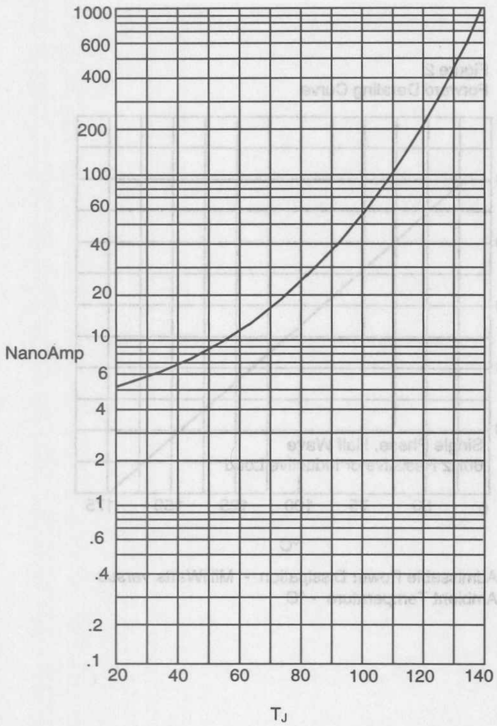


Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance

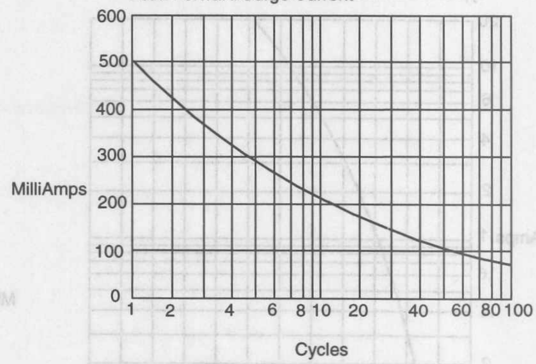


Junction Capacitance - pF *versus*
Reverse Voltage - Volts



Instantaneous Reverse Leakage Current - NanoAmperes *versus*
Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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DL4448

500mW 100Volt Switching Diode

Features

- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings

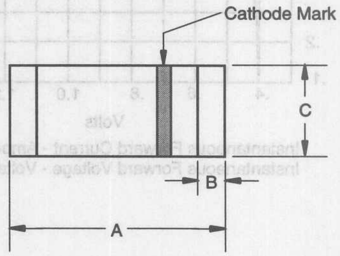
- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 35°C/W Junction To Ambient

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_O	150mA	Resistive Load f > 50Hz
Power Dissipation	P_{TOT}	500mW	
Junction Temperature	T_J	200°C	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 100mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 50µA	V_R=75Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	4pF	Measured at 1.0MHz, V_R=4.0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 6V R_L=100Ω

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

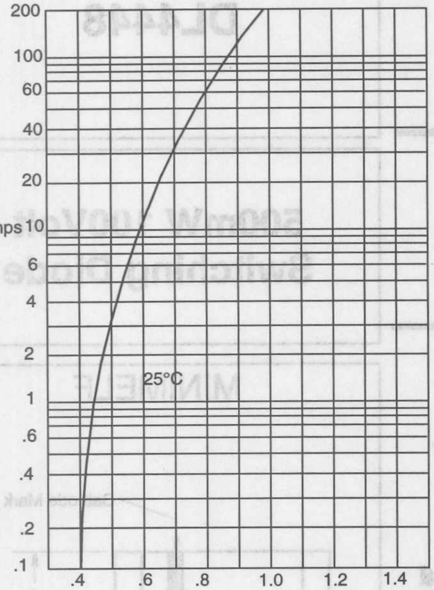
MINIMELF



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.134	.142	3.40	3.60	
B	.008	.016	.20	.40	
C	.055	.059	1.40	1.50	Ø

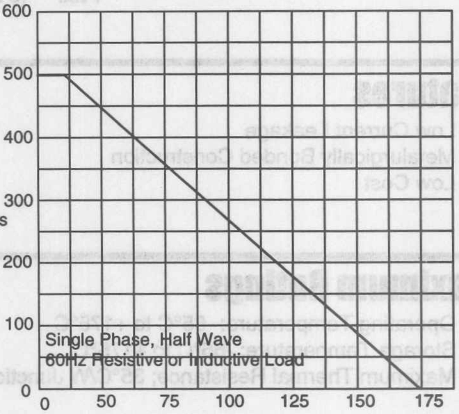
DL4448

Figure 1
Typical Forward Characteristics



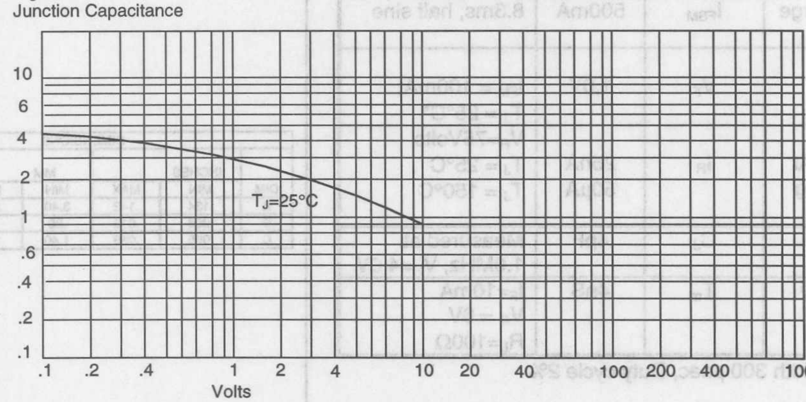
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



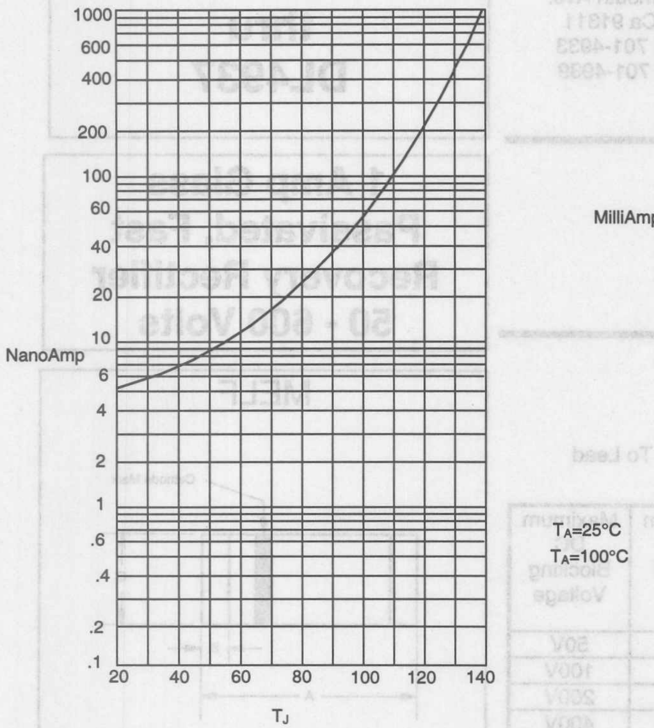
Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



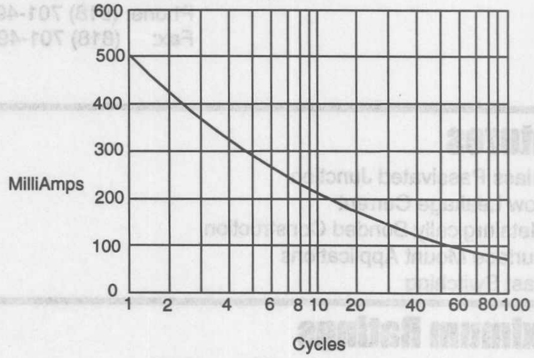
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes *versus*
Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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DL4933 thru DL4937

1 Amp Glass Passivated, Fast Recovery Rectifier 50 - 600 Volts

Features

- Glass Passivated Junction
- Low Leakage Current
- Metalurgically Bonded Construction
- Surface Mount Applications
- Fast Switching

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

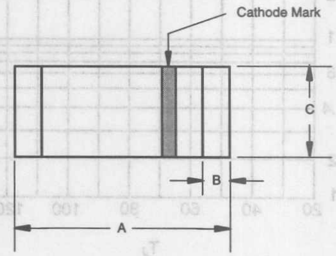
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DL4933	---	50V	35V	50V
DL4934	---	100V	70V	100V
DL4935	---	200V	140V	200V
DL4936	---	400V	280V	400V
DL4937	---	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_A =55°C
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	I_{FM} = 1.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 100μA	T_J = 25°C T_J = 125°C
Maximum Reverse Recovery Time	T_{rr}	200ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 μsec, Duty cycle 1%

MELF



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.190	.205	4.80	5.20	
B	---	.022	---	.55	Nominal
C	.095	.099	2.40	2.50	Ø

SUGGESTED SOLDER PAD LAYOUT

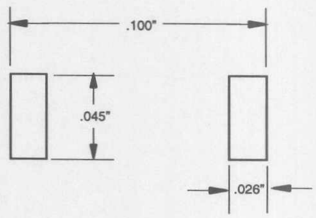
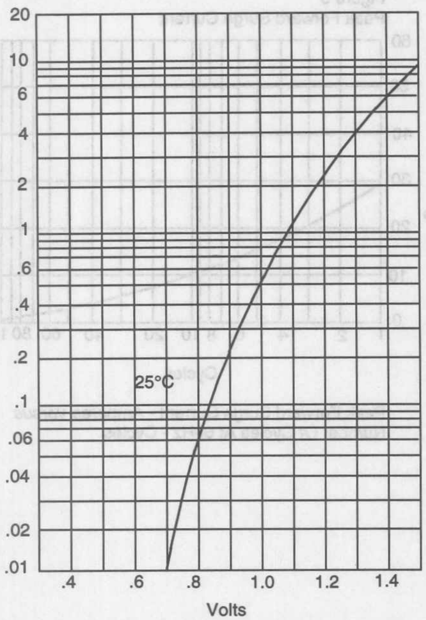
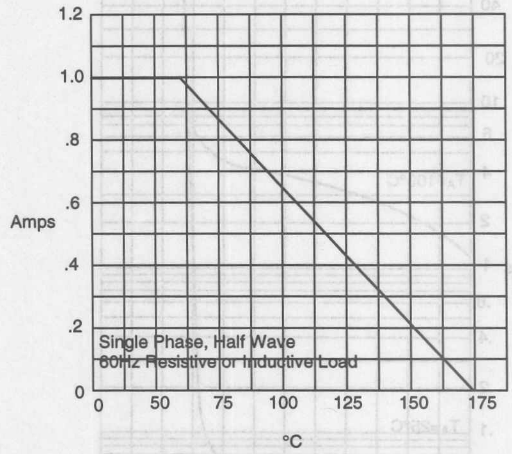


Figure 1
Typical Forward Characteristics



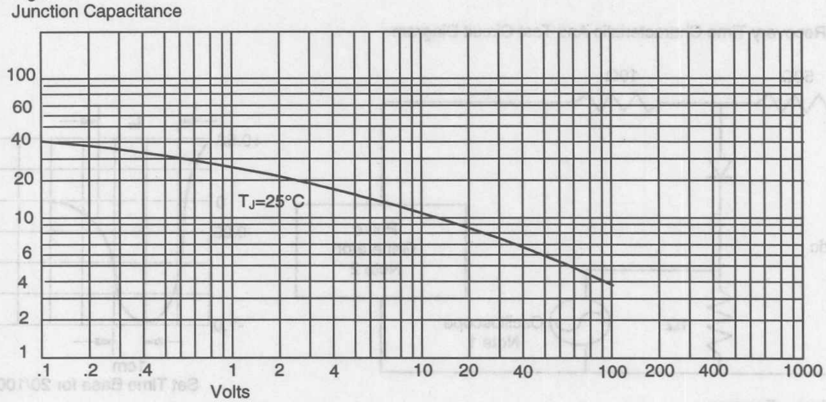
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



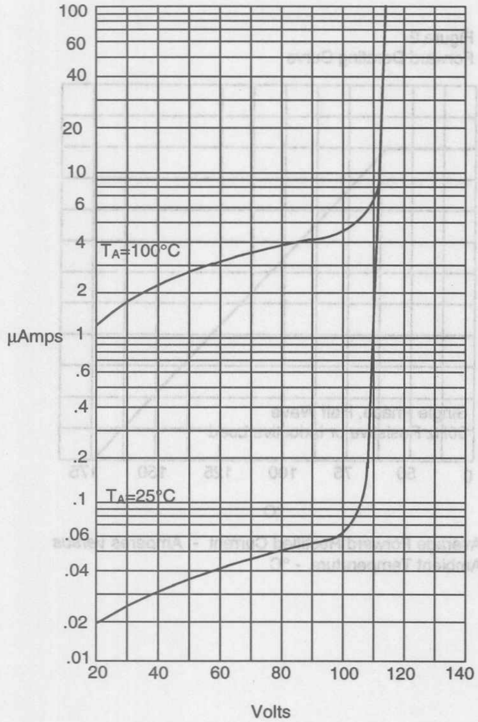
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



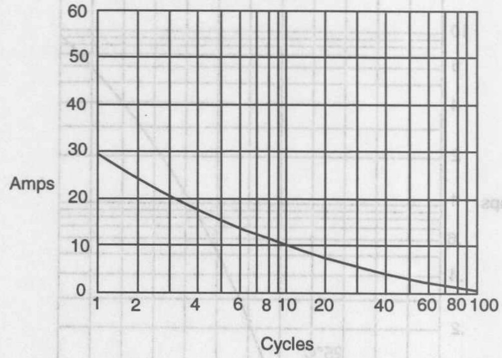
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



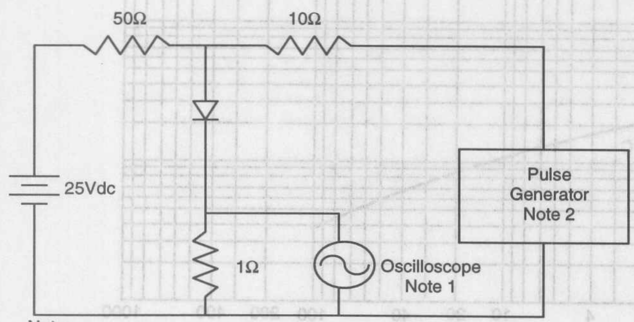
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

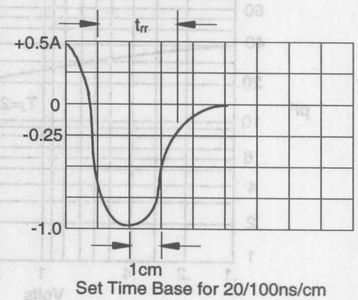
Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram





Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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DL5817 thru DL5819

1 Amp Schottky Barrier Rectifier 20 - 40 Volts

Features

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Low Power Loss For High Efficiency
- High Current Capability
- Surface Mount Applications

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

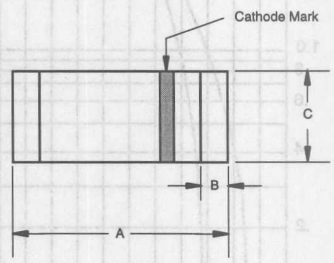
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
1N5817	---	20V	14V	20V
1N5818	---	30V	21V	30V
1N5819	---	40V	28V	40V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 90°C$
Peak Forward Surge Current	I_{FSM}	25A	8.3ms, half sine
Maximum Instantaneous Forward Voltage 1N5817 1N5818 1N5819	V_F	.45V .55V .60V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	1.0mA	$T_J = 25°C$

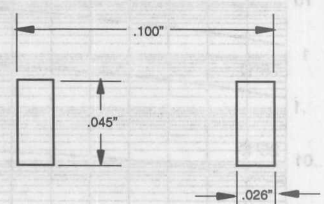
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

MELF



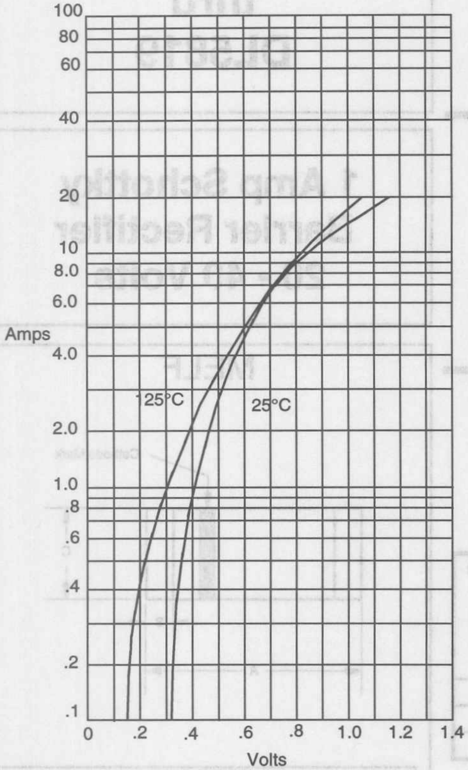
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.190	.205	4.80	5.20	
B	---	.022	---	.55	Nominal
C	.095	.099	2.40	2.50	Ø

SUGGESTED SOLDER PAD LAYOUT



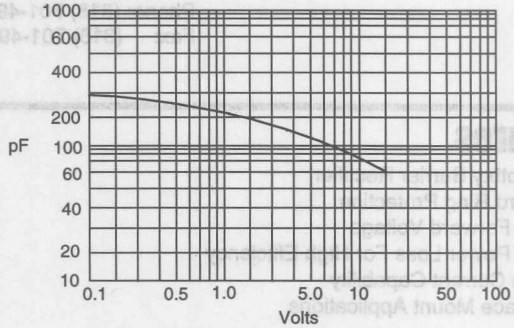
DL5817

Figure 1
Typical Forward Characteristics



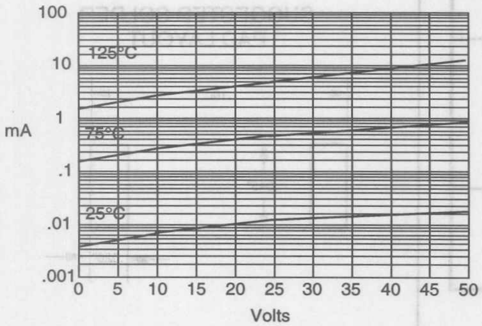
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

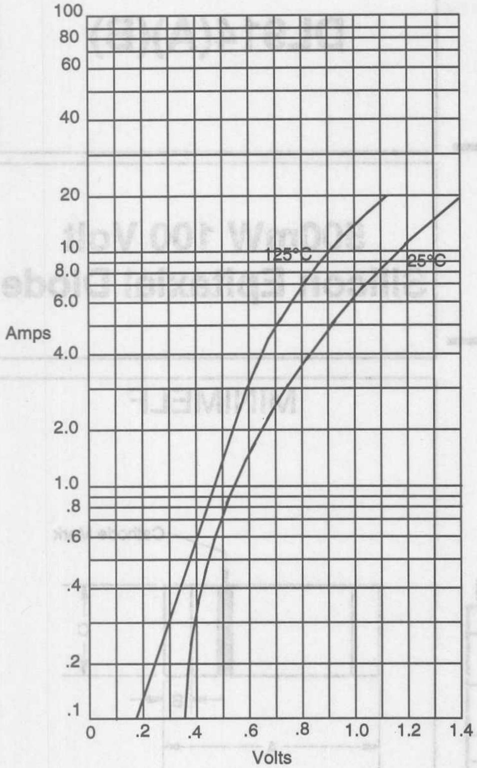
Figure 3
Typical Reverse Characteristics



Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

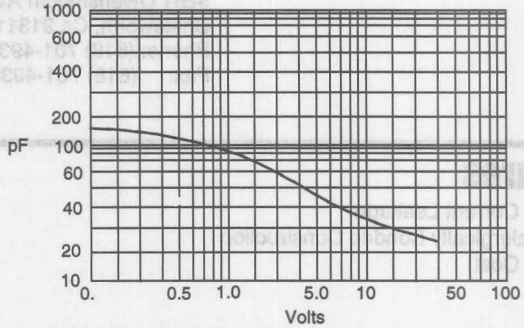
DL5818 & DL5819

Figure 1
Typical Forward Characteristics



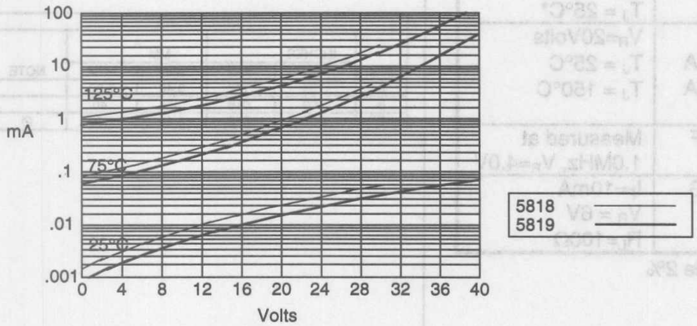
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 3
Typical Reverse Characteristics



Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

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DL914(A)(B)

500mW 100 Volt Silicon Epitaxial Diode

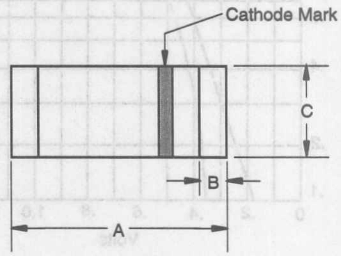
Features

- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 35°C/W Junction To Ambient

MINIMELF



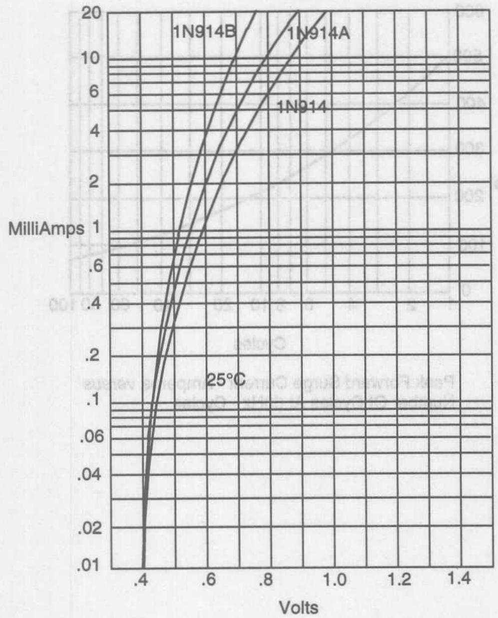
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.134	.142	3.40	3.60	
B	.008	.016	.20	.40	
C	.055	.059	1.40	1.50	Ø

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_O	150mA	Resistive Load f > 50Hz
Power Dissipation	P_{TOT}	500mW	
Junction Temperature	T_J	200°C	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 50µA	V_R=20Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	4pF	Measured at 1.0MHz, V_R=4.0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 6V R_L=100Ω

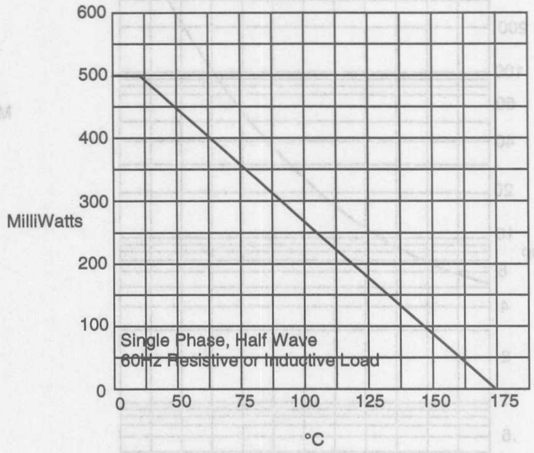
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

Figure 1
Typical Forward Characteristics



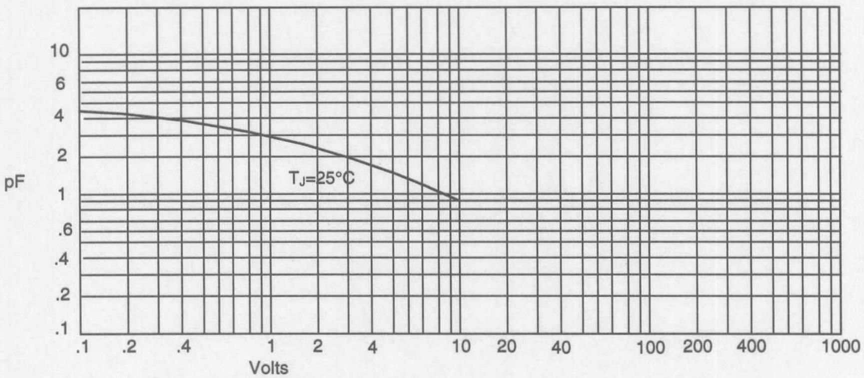
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

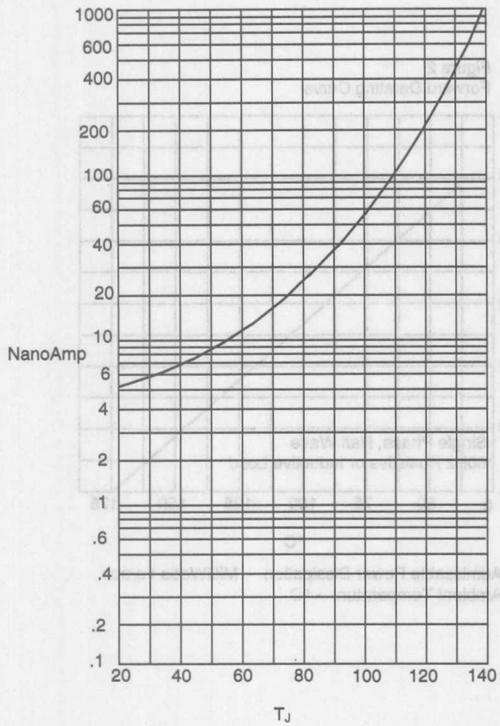
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

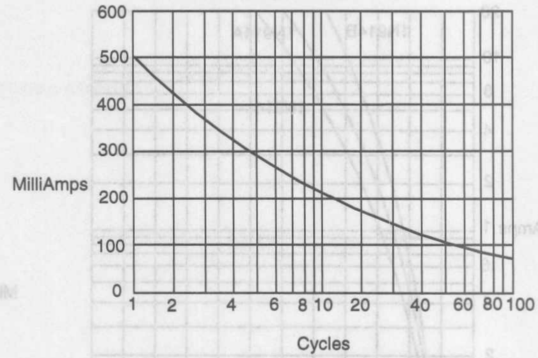
DL914

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes *versus*
Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

DLFR106 thru DLFR107

1 Amp Glass Passivated, Fast Recovery Rectifier 800 - 1000 Volts

Features

- Glass Passivated Junction
- Low Leakage Current
- Metalurgically Bonded Construction
- Surface Mount Applications
- Fast Switching

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

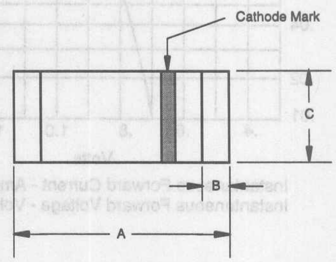
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DLFR106	---	800V	560V	800V
DLFR107	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	T_A =55°C
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	I_{FM} = 1.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	T_J = 25°C T_J = 125°C
Maximum Reverse Recovery Time DLFR106 DLFR107	T_{rr}	250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

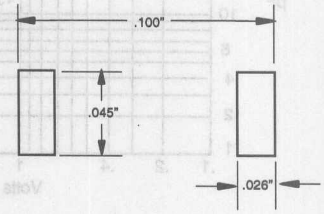
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MELF



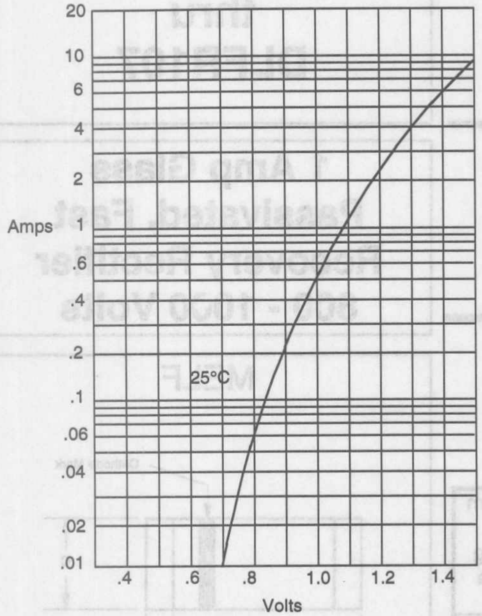
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.190	.205	4.80	5.20	
B	---	.022	---	.55	Nominal
C	.095	.099	2.40	2.50	Ø

SUGGESTED SOLDER PAD LAYOUT



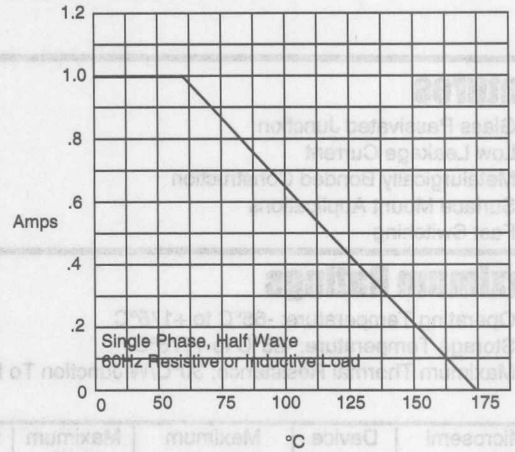
DLFR106 thru DLFR107

Figure 1
Typical Forward Characteristics



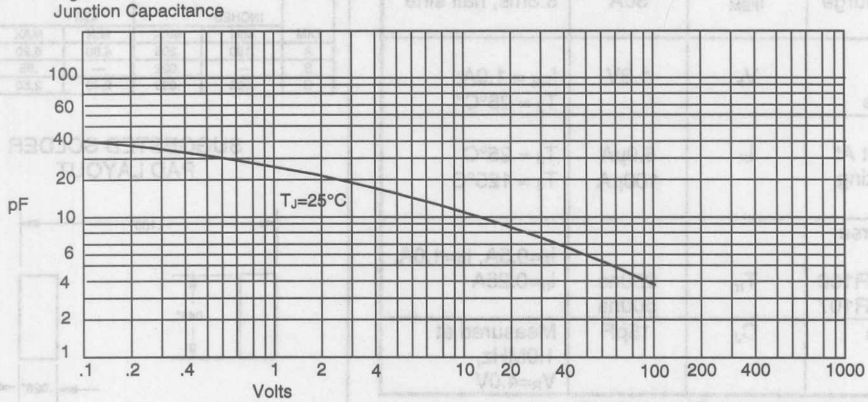
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



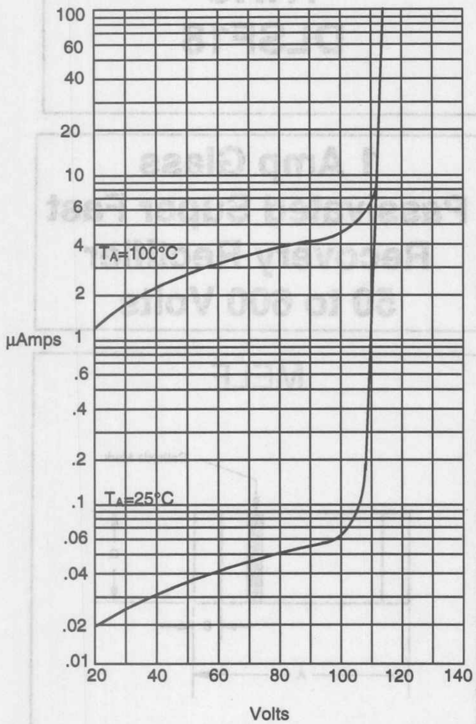
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



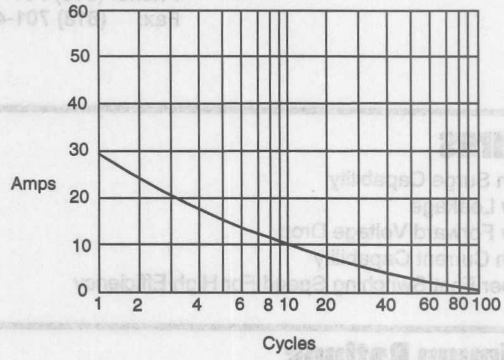
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



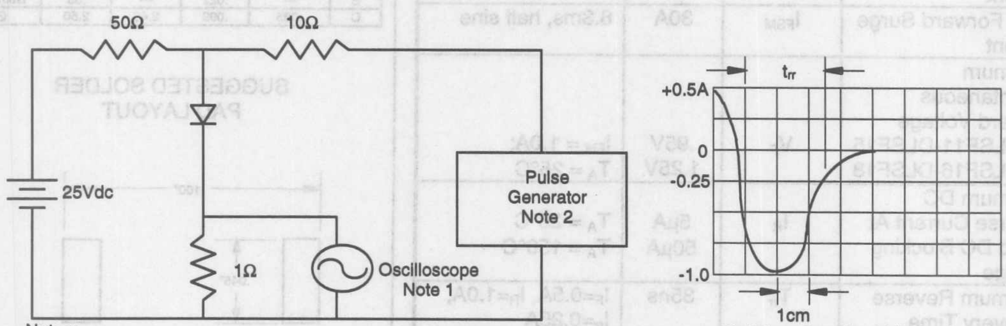
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
Chatsworth, CA
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DLSF11 THRU DLSF18

1 Amp Glass Passivated Super Fast Recovery Rectifier 50 to 600 Volts

Features

- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Super Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

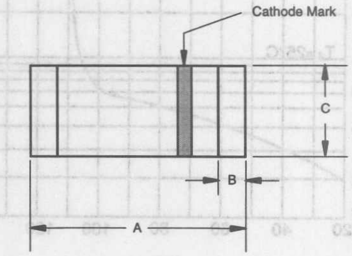
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DLSF11	---	50V	35V	50V
DLSF12	---	100V	70V	100V
DLSF13	---	150V	105V	150V
DLSF14	---	200V	140V	200V
DLSF15	---	300V	210V	300V
DLSF16	---	400V	280V	400V
DLSF18	---	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage DLSF11-DLSF15 DLSF16-DLSF18	V_F	.95V 1.25V	$I_{FM} = 1.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5μA 50μA	$T_A = 25°C$ $T_A = 150°C$
Maximum Reverse Recovery Time	T_{rr}	35ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance DLSF11-DLSF15 DLSF16-DLSF18	C_J	15pF 10pF	Measured at 1.0MHz, V_R=4.0V

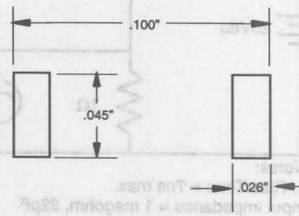
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

MELF



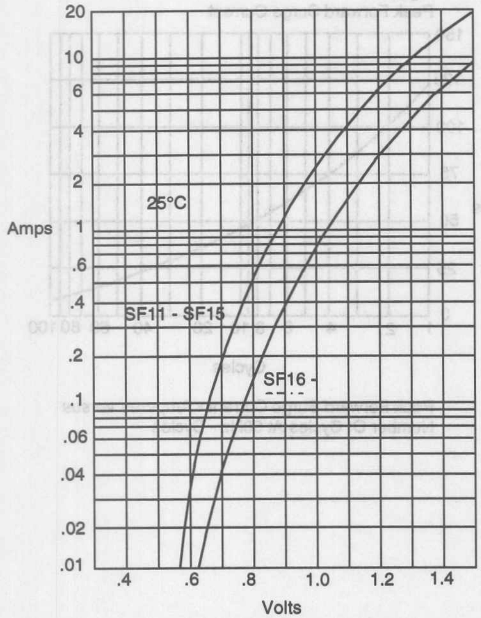
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.190	.205	4.80	5.20	
B	---	.022	---	.55	Nominal
C	.095	.099	2.40	2.50	Ø

SUGGESTED SOLDER PAD LAYOUT



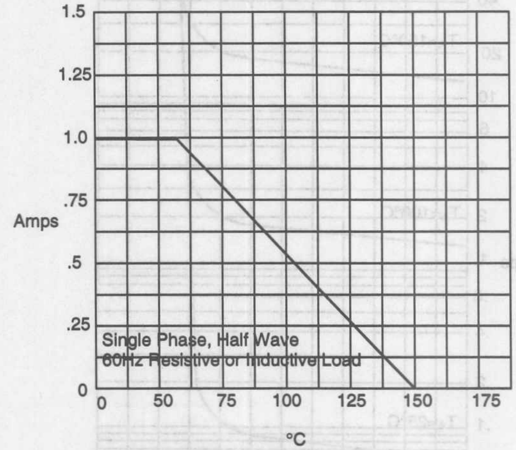
DLSF11 thru DLSF18

Figure 1
Typical Forward Characteristics



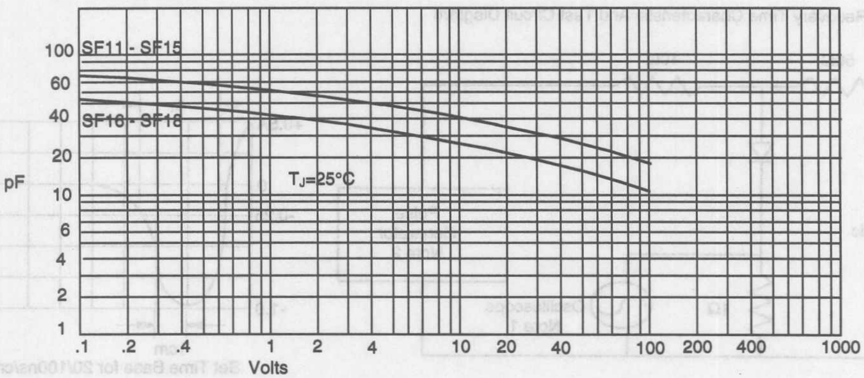
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



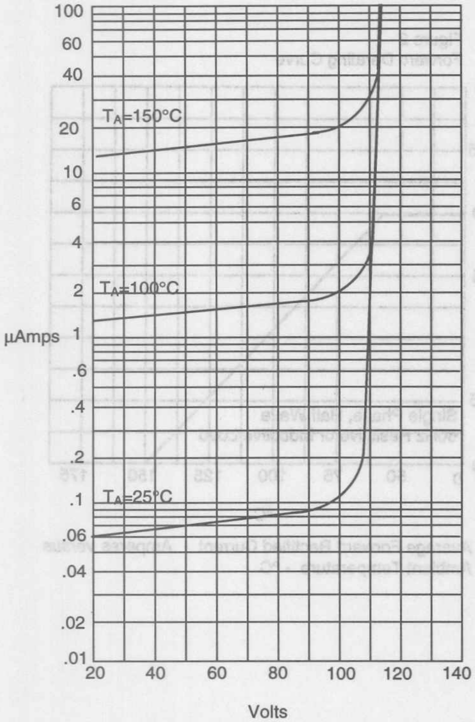
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



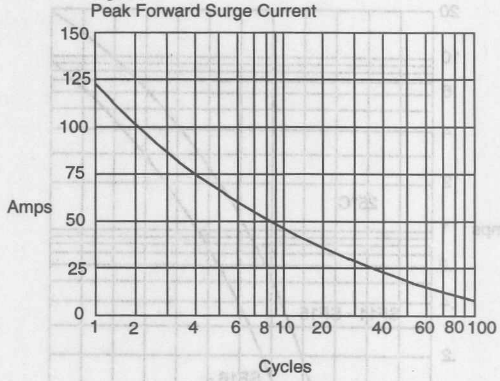
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



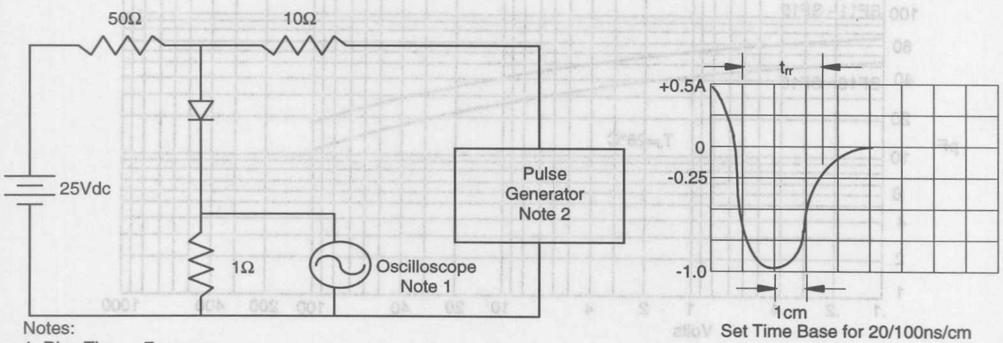
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
Chatsworth, CA
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DLSR105 thru DLSR110

1 Amp Schottky Barrier Rectifier 50 - 100 Volts

Features

- Schottky Barrier Rectifier
- Low Forward Voltage
- Low Power Loss For High Efficiency
- High Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

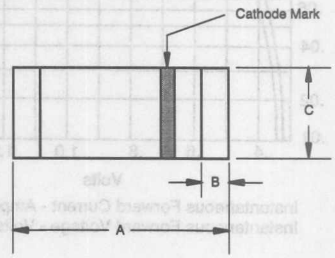
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DLSR105	---	50V	35V	50V
DLSR106	---	60V	42V	60V
DLSR108	---	80V	56V	80V
DLSR1010	---	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage DLSR105-DLSR106 DLSR108-DLSR1010	V_F	.70V .80V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	0.5mA 10mA	$T_J = 25°C$ $T_J = 100°C$

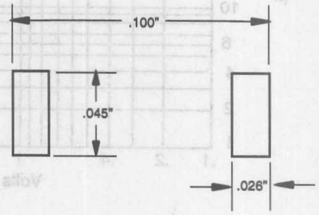
*Pulse test: Pulse width 300 μsec, Duty cycle 2%

MELF



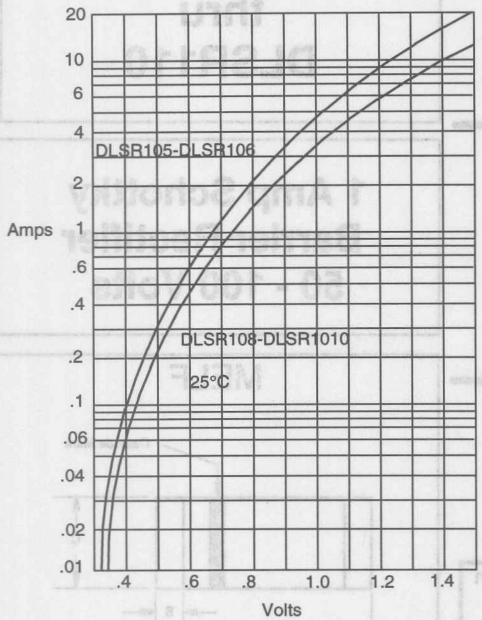
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.190	.205	4.80	5.20	
B	---	.022	---	.55	Nominal
C	.095	.099	2.40	2.50	Ø

SUGGESTED SOLDER PAD LAYOUT



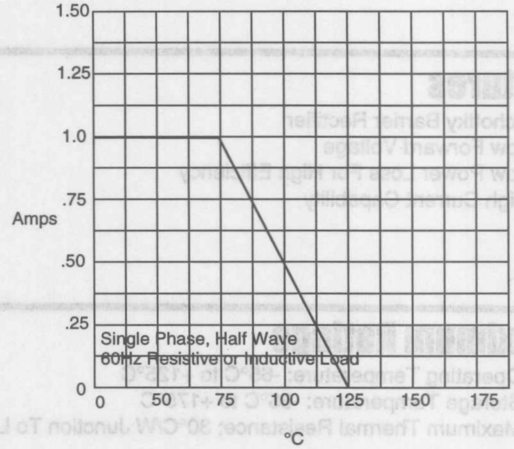
DLSR105 thru DLSR1010

Figure 1
Typical Forward Characteristics



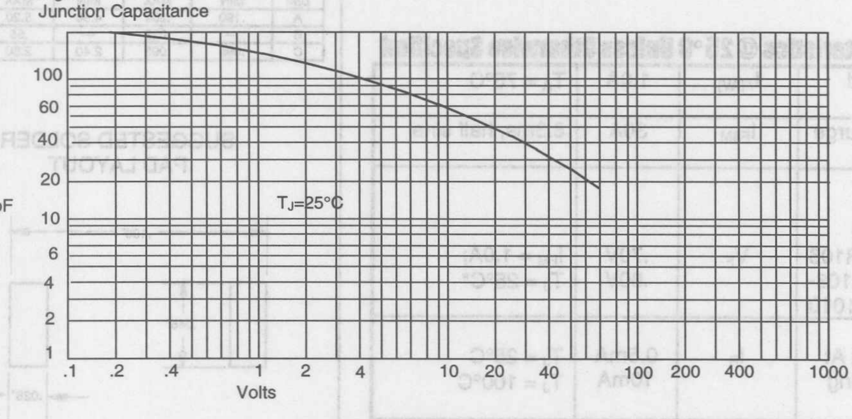
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



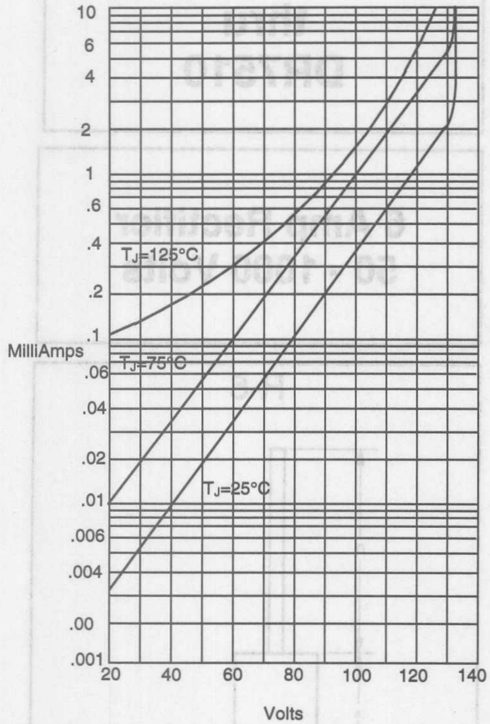
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



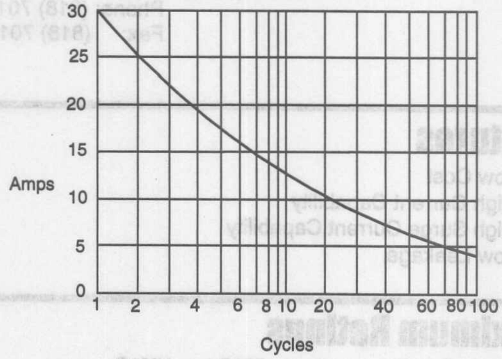
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Chatsworth, Ca 91311
Phone: (818) 701-4933
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DR750 thru DR7510

6 Amp Rectifier 50 - 1000 Volts

Features

- Low Cost
- High Current Capability
- High Surge Current Capability
- Low Leakage

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 10°C/W Junction To Ambient

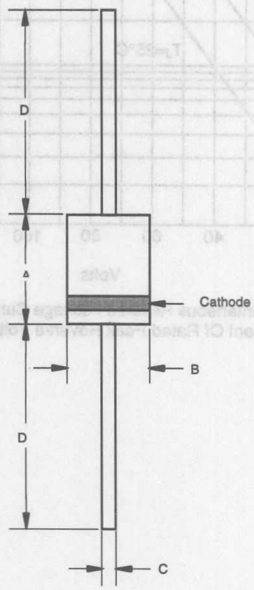
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
DR750	DR750	50V	35V	50V
DR751	DR751	100V	70V	100V
DR752	DR752	200V	140V	200V
DR754	DR754	400V	280V	400V
DR756	DR756	600V	420V	600V
DR758	DR758	800V	560V	800V
DR7510	DR7510	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6.0A	$T_A = 60°C$
Peak Forward Surge Current	I_{FSM}	250A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	0.95V	$I_{FM} = 6.0A$; $T_A = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 1mA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	300pF	Measured at 1.0MHz, V_R=4.0V

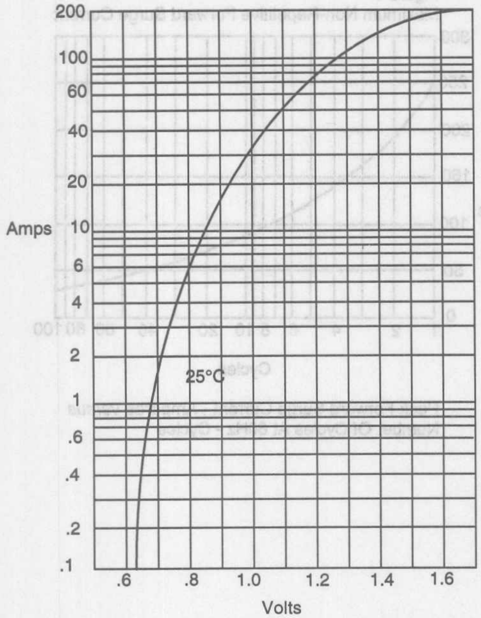
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

R-6



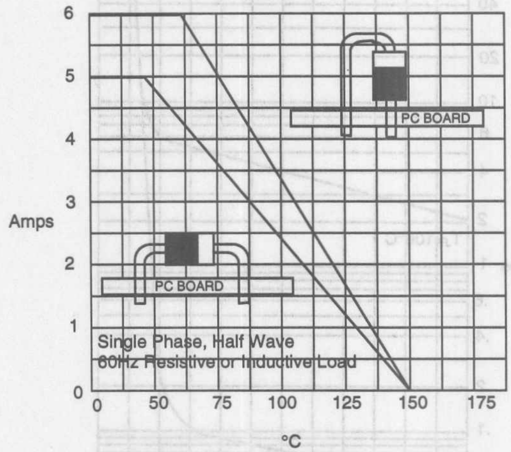
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.340	.360	8.60	9.10	
B	.340	.360	8.60	9.10	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



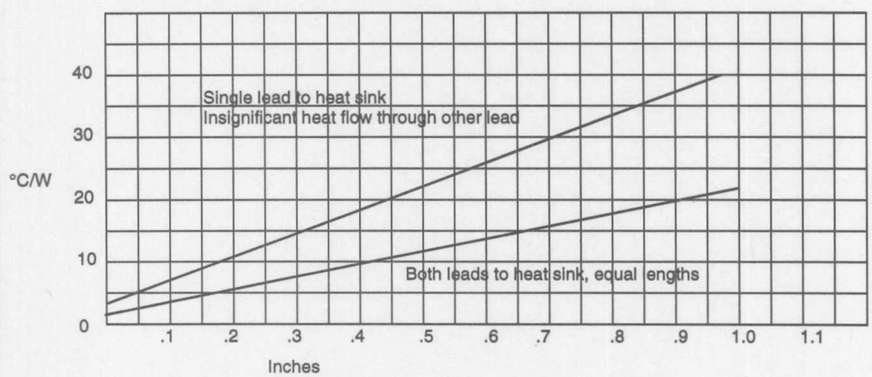
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



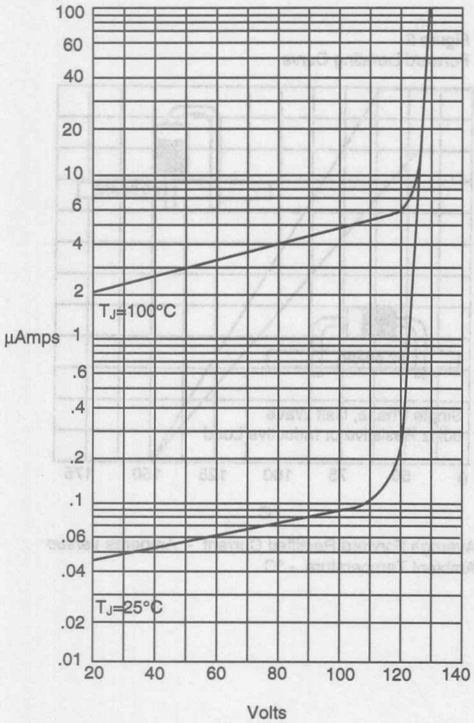
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Typical Thermal Resistance versus Lead Length



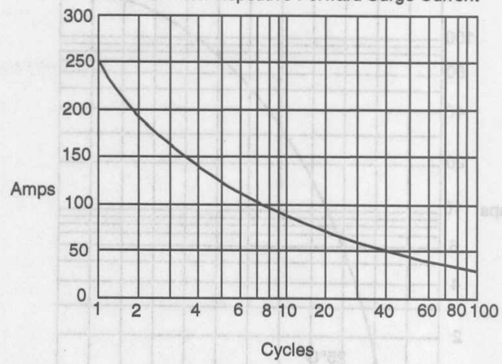
Thermal Resistance - °C/W *versus*
Equal Lead Length To Heat Sink - Inches

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA

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ER1A THRU ER1J

1 Amp Super Fast Recovery Silicon Rectifier 50 to 600 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

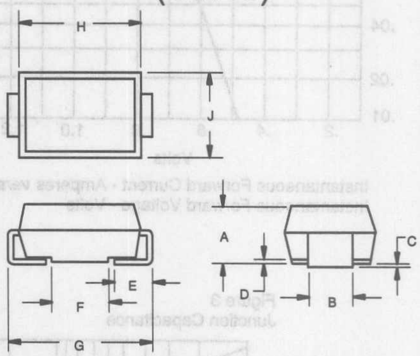
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SMBSF11	ER1A	50V	35V	50V
SMBSF12	ER1B	100V	70V	100V
SMBSF13	ER1C	150V	105V	150V
SMBSF14	ER1D	200V	140V	200V
SMBSF16	ER1G	400V	280V	400V
SMBSF18	ER1J	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_J = 75°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage ER1A-D ER1G-J	V_F	.95V 1.35V	$I_{FM} = 2.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5μA 30μA	$T_J = 25°C$ $T_J = 125°C$
Maximum Reverse Recovery Time	T_{rr}	35ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	45pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 200 μsec, Duty cycle 2%

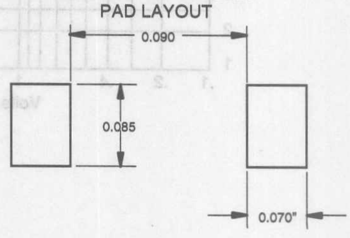
DO-214AA (SMBJ)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.075	.115	1.90	2.92	1
B	.081	.087	2.06	2.21	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

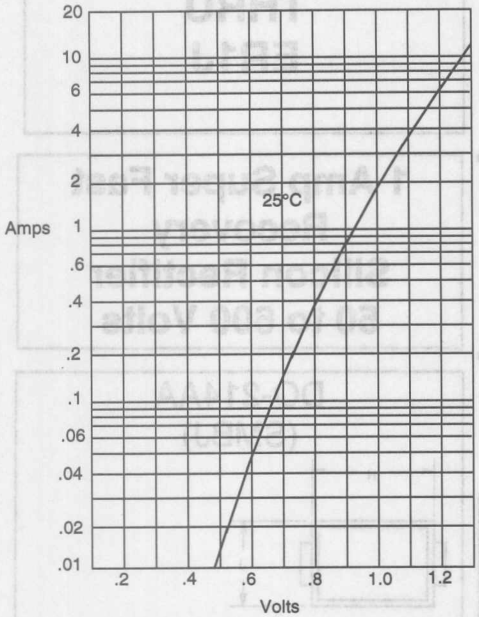
1) Maximum Jedec Spec is .096" or 2.44 MM

SUGGESTED SOLDER PAD LAYOUT



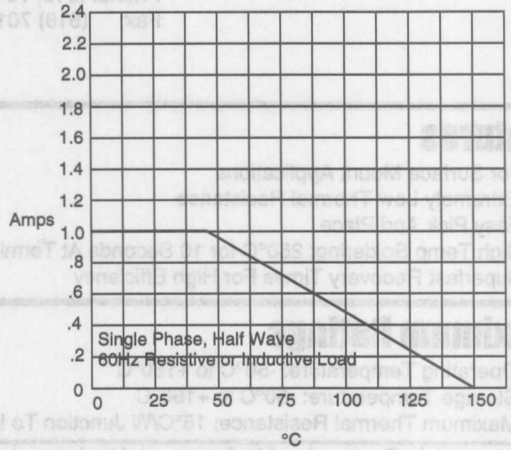
ER1A thru ER1J

Figure 1
Typical Forward Characteristics



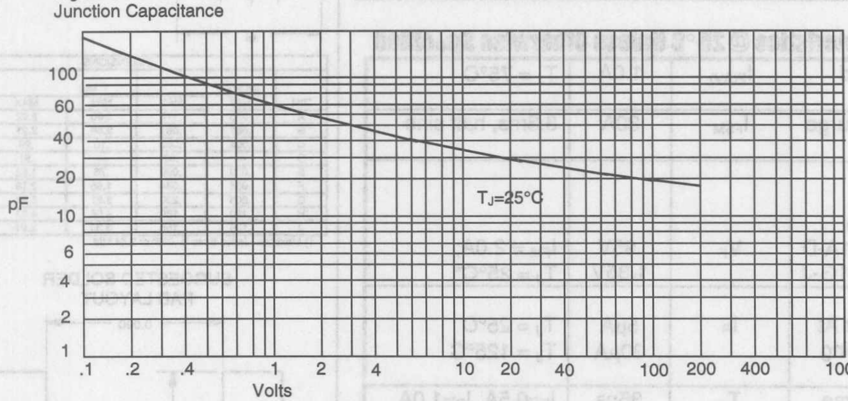
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

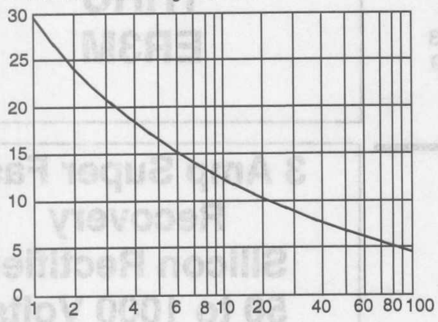
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

ER1A thru ER1J

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
New SMB Assembly

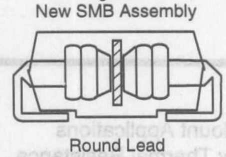
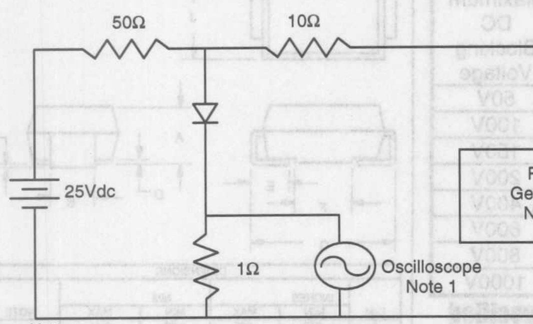
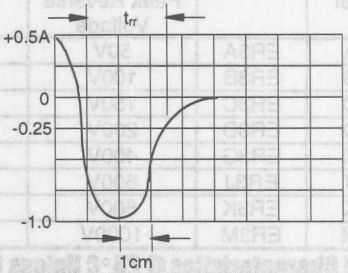


Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram





Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
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ER3A THRU ER3M

3 Amp Super Fast Recovery Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals\
- Super Fast Recovery Times For High Effieciency

Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +125°C
- Maximum Thermal Resistance; 10°C/W Junction To Lead

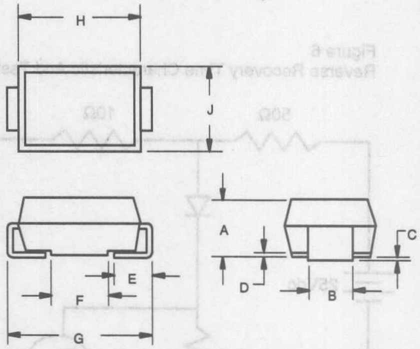
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
ER3A	ER3A	50V	35V	50V
ER3B	ER3B	100V	70V	100V
ER3C	ER3C	150V	105V	150V
ER3D	ER3D	200V	140V	200V
ER3G	ER3G	400V	280V	400V
ER3J	ER3J	600V	420V	600V
ER3K	ER3K	800V	560V	800V
ER3M	ER3M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	T_J = 120°C
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage ER3A-G ER3J-M	V_F	.90V 1.25V	I_{FM} = 3.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 500µA	T_J = 25°C T_J = 100°C
Maximum Reverse Recovery Time	T_{rr}	35ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	45pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 200 µsec, Duty cycle 2%

DO-214AB (SMCJ)



DIMENSIONS					
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.075	.095	1.90	2.41	
B	.115	.121	2.92	3.07	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F					
G	.305	.320	7.75	8.13	
H	.260	.280	6.60	7.11	
J	.220	.245	5.59	6.22	

SUGGESTED SOLDER PAD LAYOUT

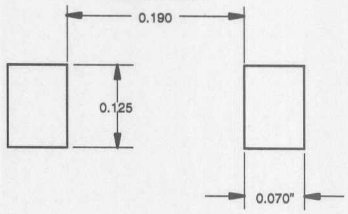
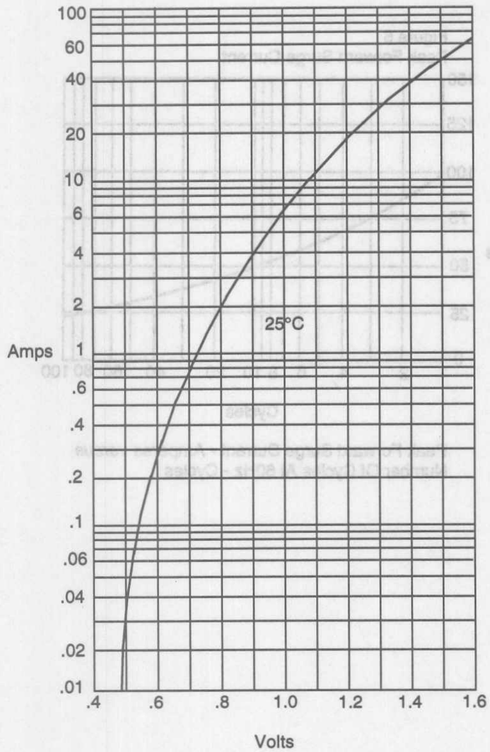
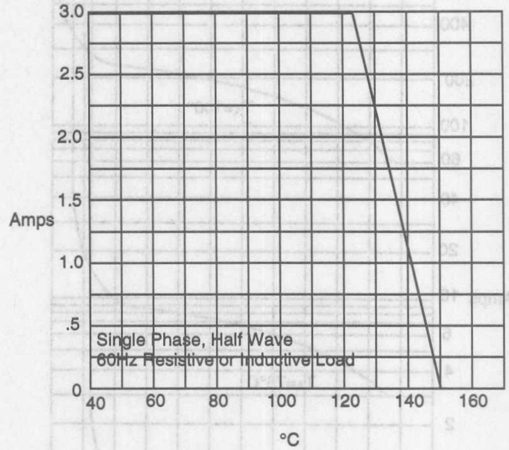


Figure 1
Typical Forward Characteristics



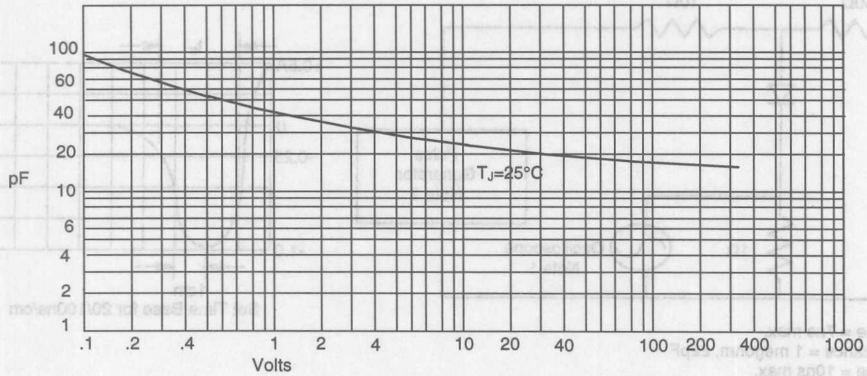
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



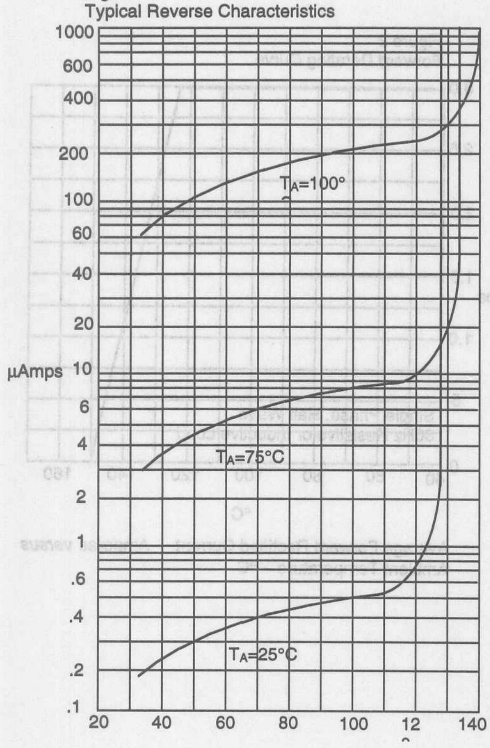
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



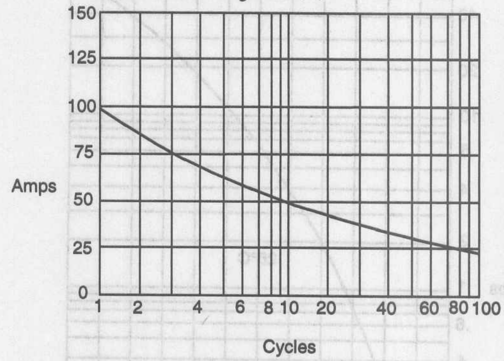
Junction Capacitance - pF *versus* Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



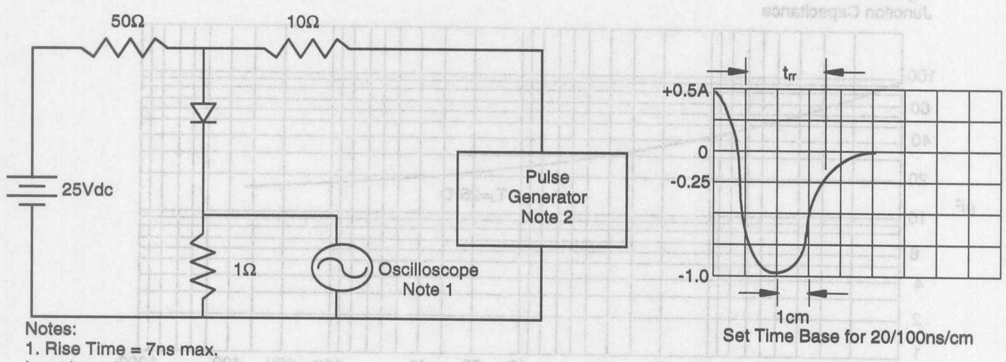
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
Chatsworth, CA
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

ES1A THRU ES1J

1 Amp Super Fast Recovery Silicon Rectifier 50 to 600 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

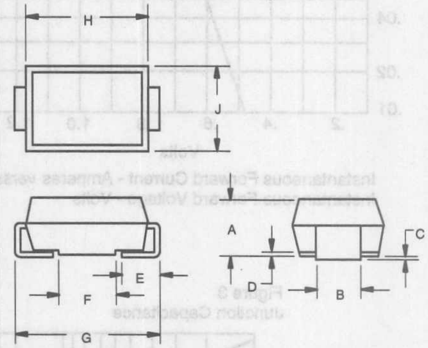
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
ES1A	ES1A	50V	35V	50V
ES1B	ES1B	100V	70V	100V
ES1C	ES1C	150V	105V	150V
ES1D	ES1D	200V	140V	200V
ES1G	ES1G	400V	280V	400V
ES1J	ES1J	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_J = 75°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage ES1A-D ES1G-J	V_F	.95V 1.35V	$I_{FM} = 2.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5μA 30μA	$T_J = 25°C$ $T_J = 125°C$
Maximum Reverse Recovery Time	T_{rr}	35ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	45pF	Measured at 1.0MHz, V_R=4.0V

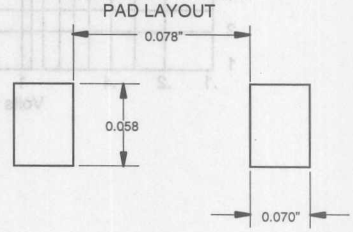
*Pulse test: Pulse width 200 μsec, Duty cycle 2%

DO-214AC
(SMAJ)



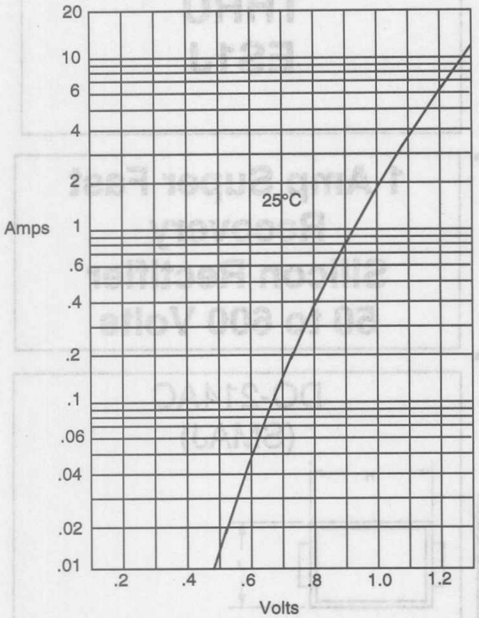
DIM	DIMENSIONS INCHES MIN	MAX	MM MIN	MAX	NOTE
A	.078	.115	1.98	2.92	1
B	.052	.058	1.32	1.47	
C	---	.005	---	.127	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.194	.216	4.93	5.48	
H	.157	.177	3.99	4.50	
J	.100	.110	2.57	2.79	

SUGGESTED SOLDER PAD LAYOUT



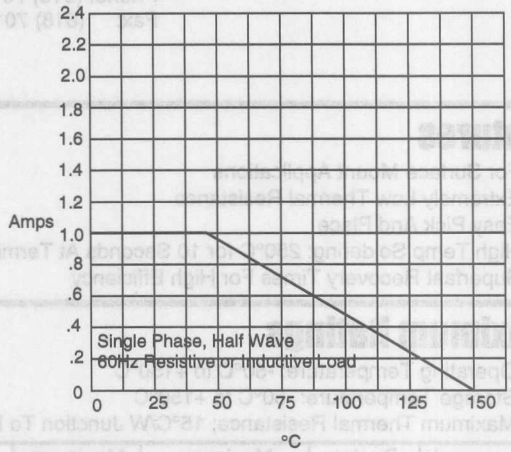
ES1A thru ES1J

Figure 1
Typical Forward Characteristics



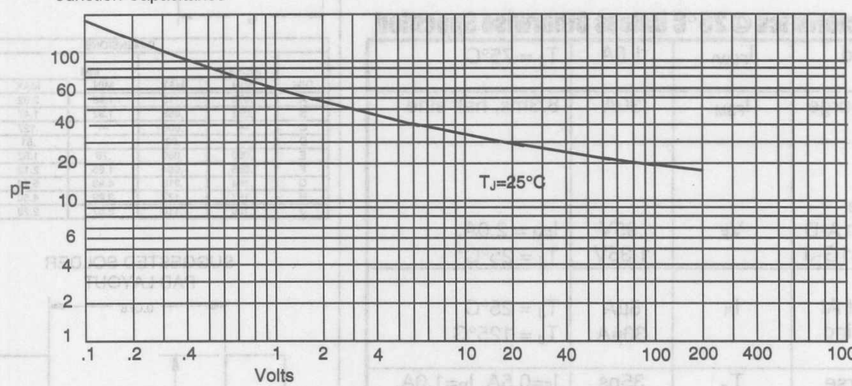
Instantaneous Forward Current - Amperes *versus* Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



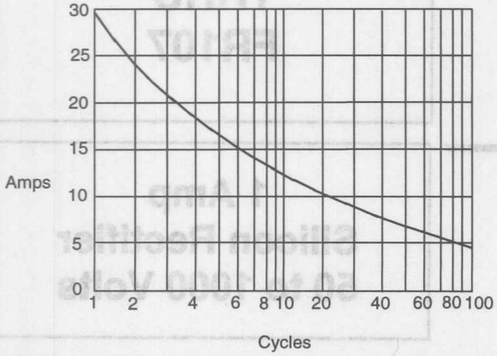
Average Forward Rectified Current - Amperes *versus* Ambient Temperature - °C

Figure 3
Junction Capacitance



Junction Capacitance - pF *versus* Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
New SMA Assembly

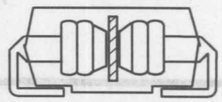
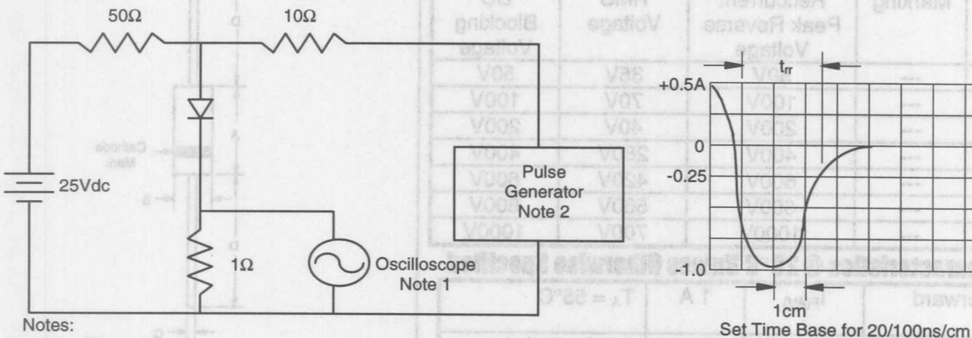


Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Chatsworth, CA
Microsemi
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Fax: (818) 701-4939

FR101 THRU FR107

1 Amp Silicon Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

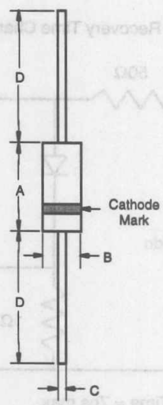
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR101	---	50V	35V	50V
FR102	---	100V	70V	100V
FR103	---	200V	40V	200V
FR104	---	400V	280V	400V
FR105	---	600V	420V	600V
FR106	---	800V	560V	800V
FR107	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 1.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time FR101-104 FR105 FR106-107	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

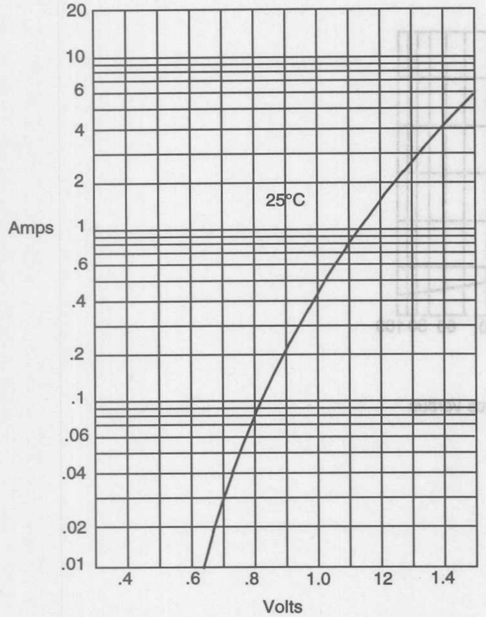
*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

DO-41



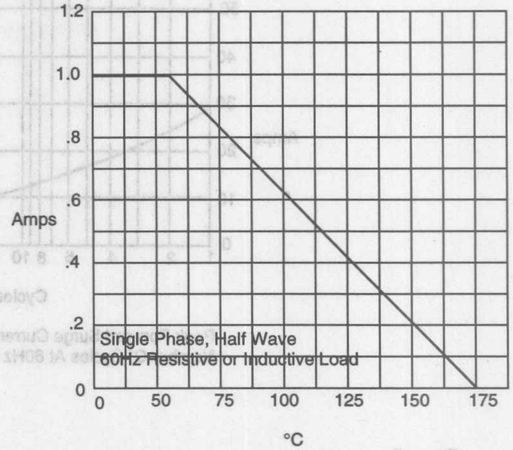
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



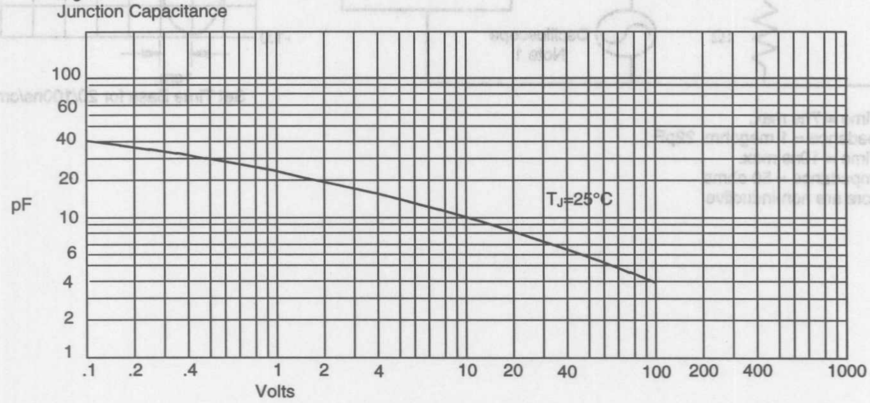
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



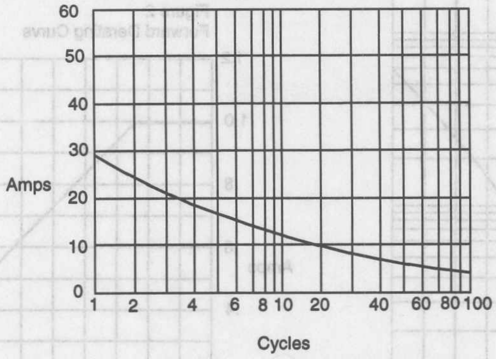
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



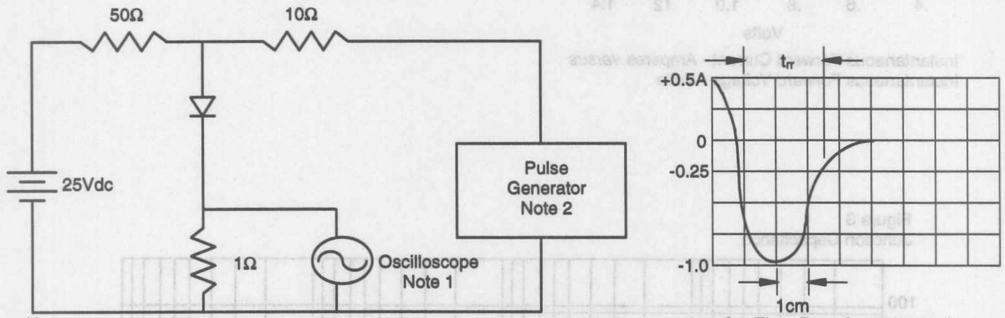
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Set Time Base for 20/100ns/cm

Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
Chatsworth, CA
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Phone: (818) 701-4933
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FR101GP THRU FR107GP

1 Amp Glass Passivated Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency
- Glass Passivated Junction

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

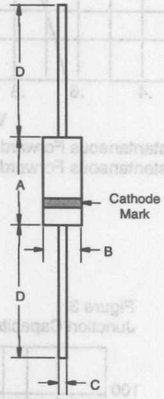
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR101	---	50V	35V	50V
FR102	---	100V	70V	100V
FR103	---	200V	40V	200V
FR104	---	400V	280V	400V
FR105	---	600V	420V	600V
FR106	---	800V	560V	800V
FR107	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 1.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time FR101-104 FR105 FR106-107	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

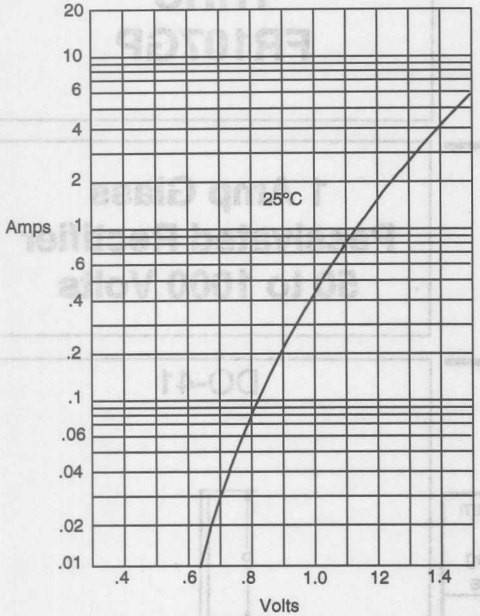
DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

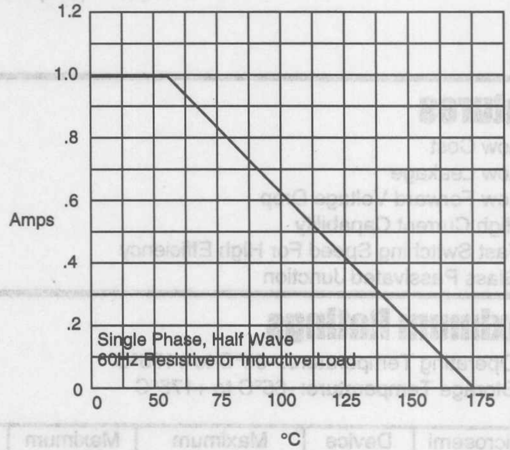
FR101GP thru FR107GP

Figure 1
Typical Forward Characteristics



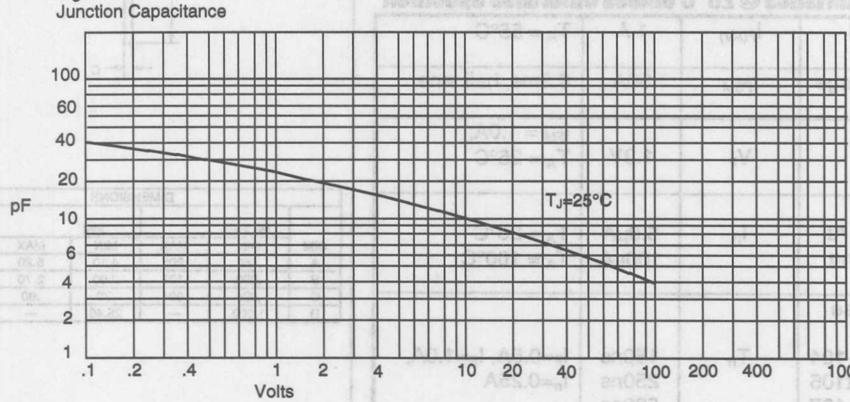
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



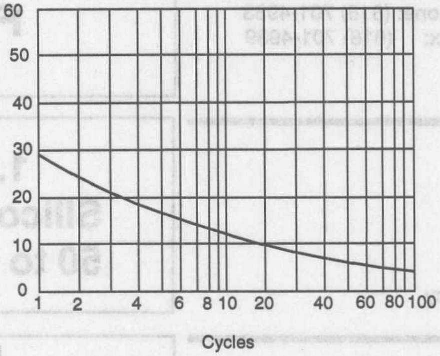
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



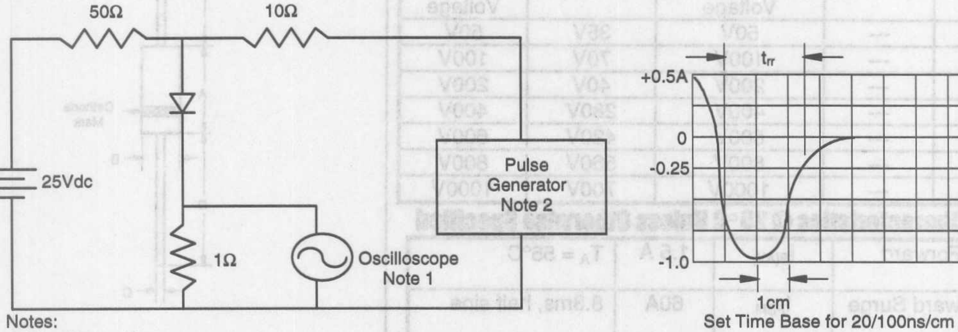
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
Chatsworth, CA
Progress Powered by Technology

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Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

FR151 THRU FR157

1.5 Amp Silicon Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

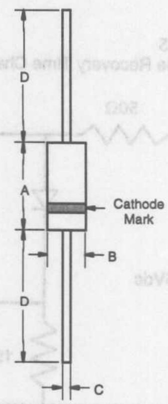
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR151	---	50V	35V	50V
FR152	---	100V	70V	100V
FR153	---	200V	40V	200V
FR154	---	400V	280V	400V
FR155	---	600V	420V	600V
FR156	---	800V	560V	800V
FR157	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.5 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	60A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 1.5A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time FR151-154 FR155 FR156-157	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	20pF	Measured at 1.0MHz, V_R=4.0V

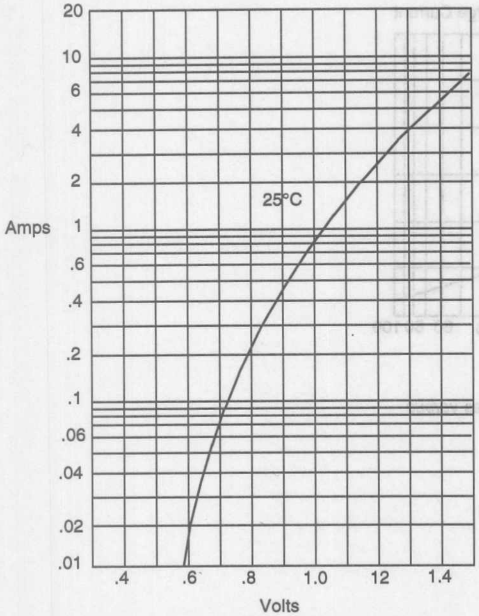
*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

DO-15



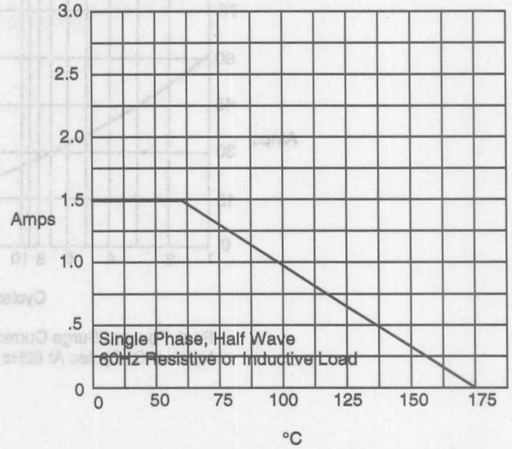
DIMENSIONS					
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



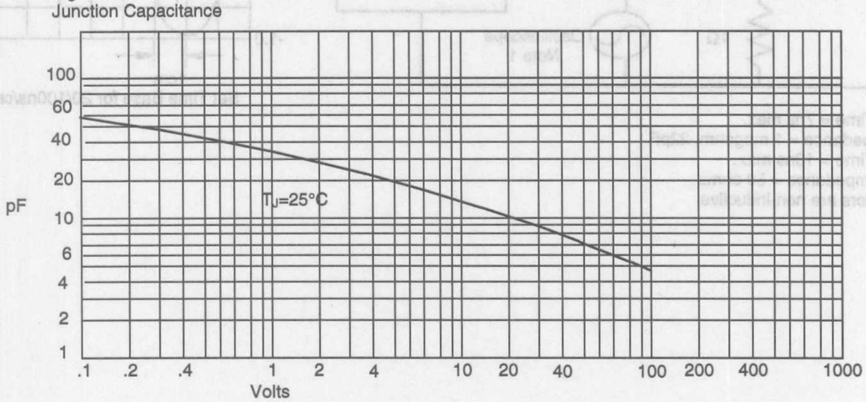
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



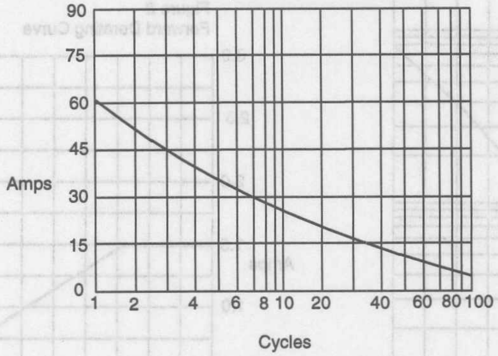
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



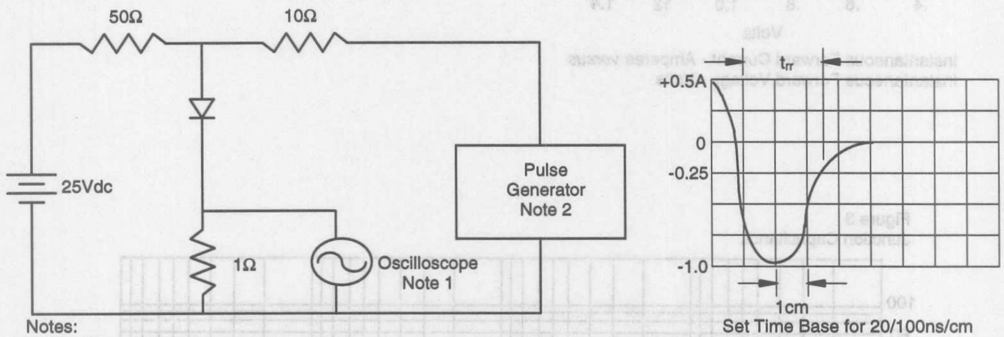
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
Chatsworth, CA
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

FR151GP THRU FR157GP

1.5 Amp Glass Passivated Silicon Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency
- Glass Passivated Junction

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

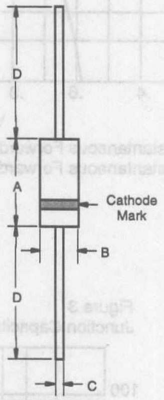
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR151GP	---	50V	35V	50V
FR152GP	---	100V	70V	100V
FR153GP	---	200V	40V	200V
FR154GP	---	400V	280V	400V
FR155GP	---	600V	420V	600V
FR156GP	---	800V	560V	800V
FR157GP	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.5 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	60A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 1.5A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time FR151GP-154GP FR155GP FR156GP-157GP	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	20pF	Measured at 1.0MHz, V_R=4.0V

*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

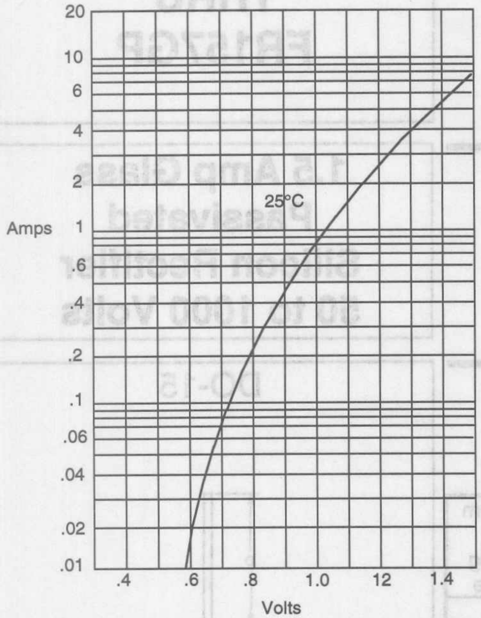
DO-15



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

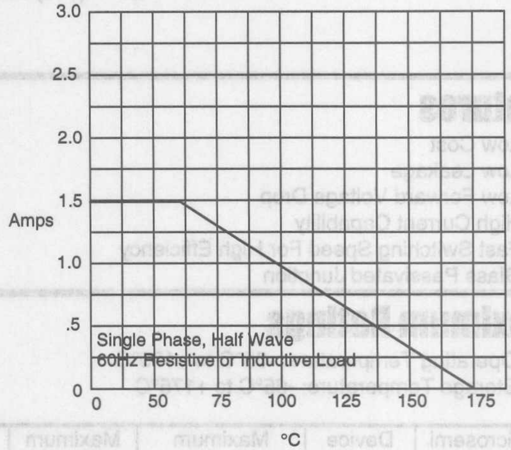
FR151GP thru FR157GP

Figure 1
Typical Forward Characteristics



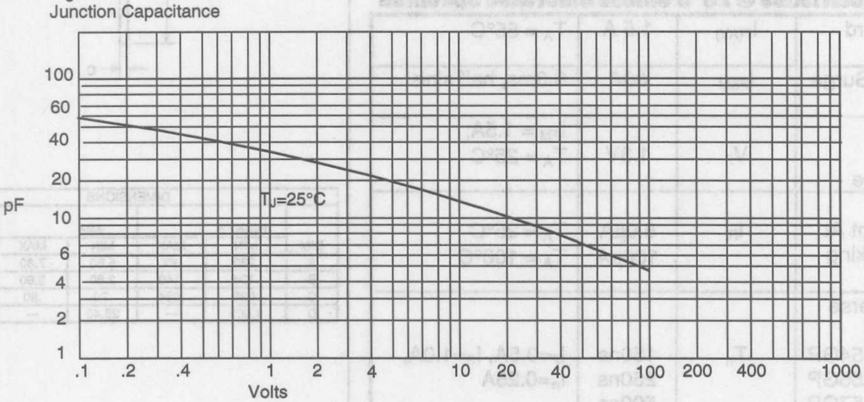
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



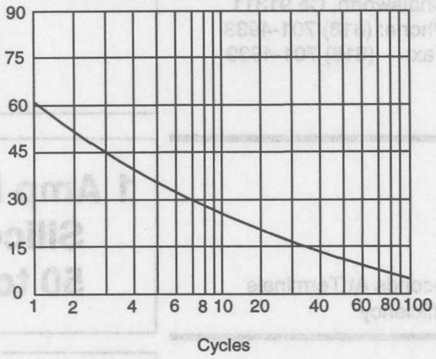
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



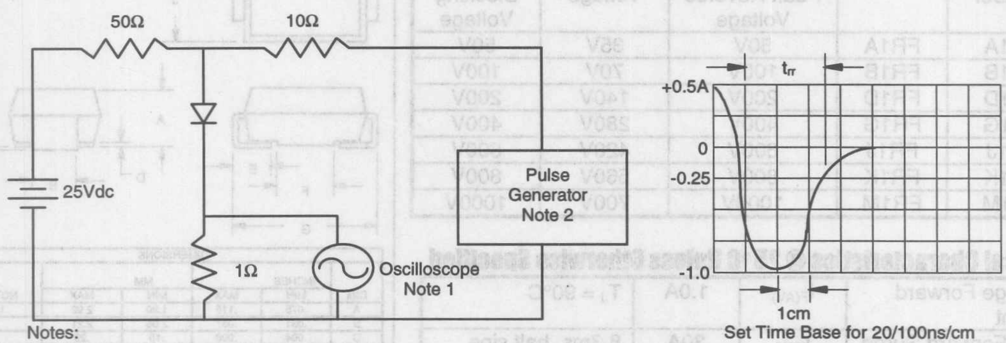
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
Chatsworth, CA
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9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

FR1A
THRU
FR1M

1 Amp Fast Recovery Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

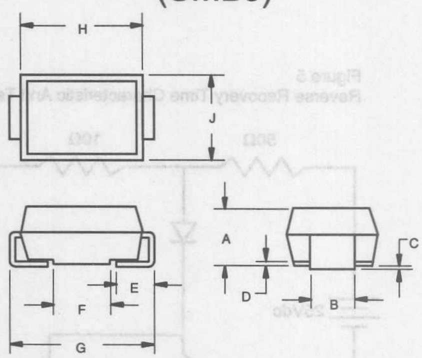
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR1A	FR1A	50V	35V	50V
FR1B	FR1B	100V	70V	100V
FR1D	FR1D	200V	140V	200V
FR1G	FR1G	400V	280V	400V
FR1J	FR1J	600V	420V	600V
FR1K	FR1K	800V	560V	800V
FR1M	FR1M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	1.0A	$T_J = 90°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.30V	$I_{FM} = 2.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5μA 200μA	$T_J = 25°C$ $T_J = 125°C$
Maximum Reverse Recovery Time FR1A-G FR1J FR1K-M	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	50pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 200 μsec, Duty cycle 2%

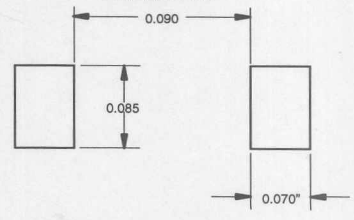
DO-214AA (SMBJ)



DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.075	.115	1.90	2.92	1
B	.081	.087	2.06	2.21	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

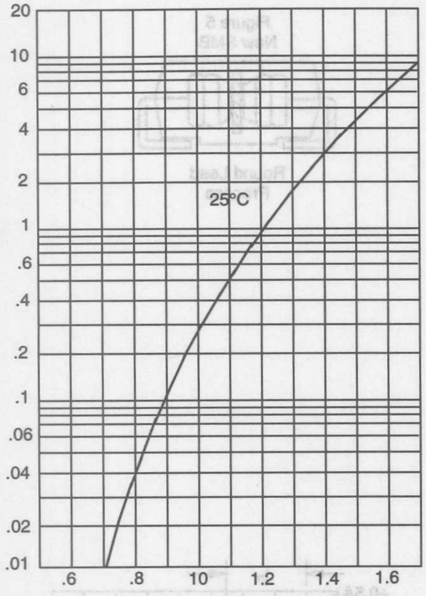
1) Maximum Jedec Spec is .096" or 2.44 MM

SUGGESTED SOLDER PAD LAYOUT



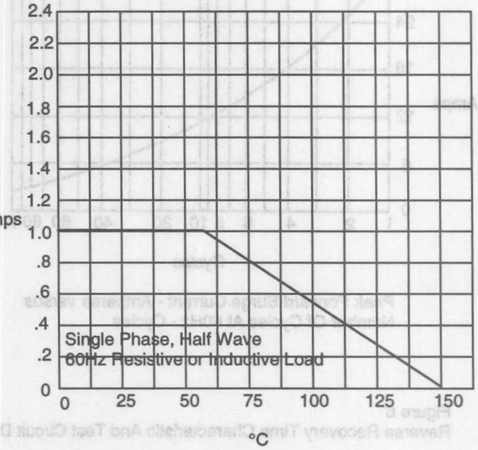
FR1A thru FR1M

Figure 1
Typical Forward Characteristics



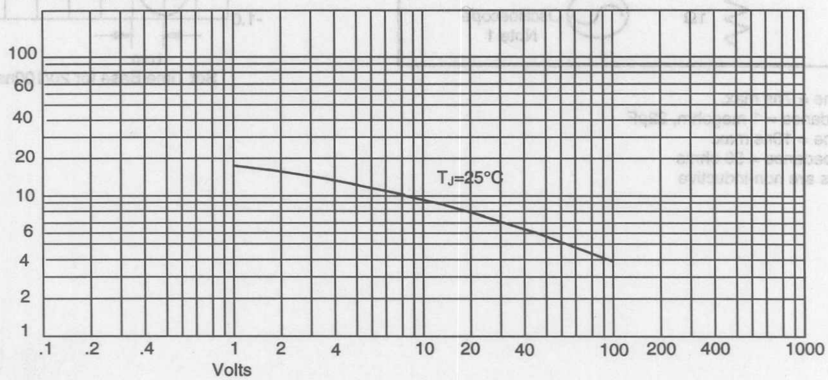
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



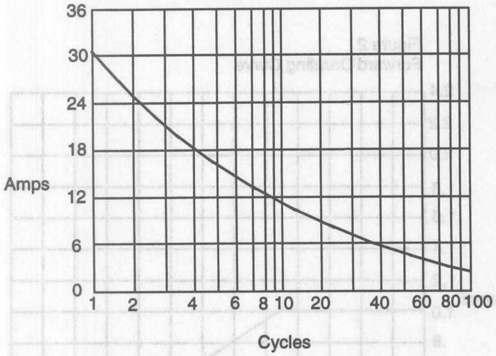
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



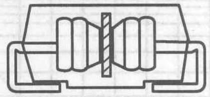
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



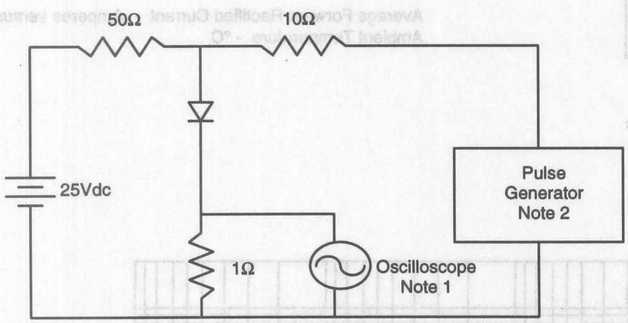
Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

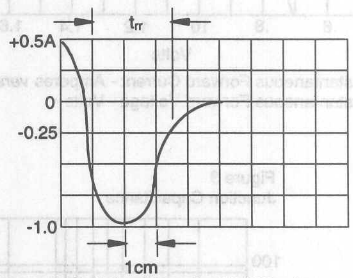
Figure 5
New SMB



Round Lead
Process

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Chatsworth, CA

Microsemi

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9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

FR201 THRU FR207

2 Amp Silicon Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

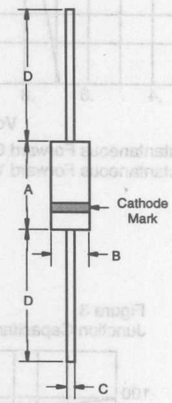
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR201	---	50V	35V	50V
FR202	---	100V	70V	100V
FR203	---	200V	40V	200V
FR204	---	400V	280V	400V
FR205	---	600V	420V	600V
FR206	---	800V	560V	800V
FR207	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	70A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 2.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 100μA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time FR201-204 FR205 FR206-207	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	40pF	Measured at 1.0MHz, V_R=4.0V

*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

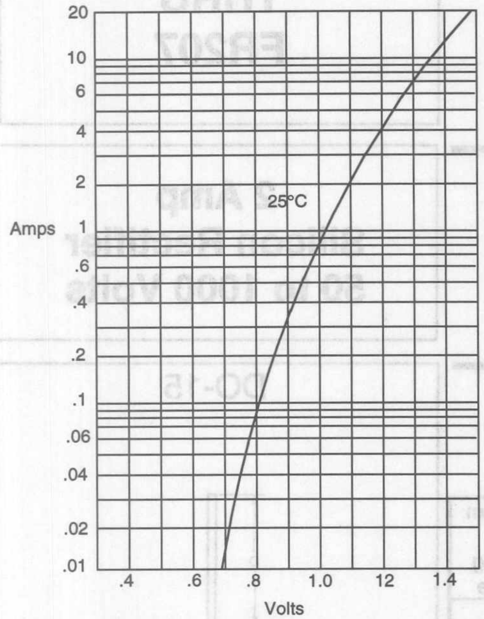
DO-15



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

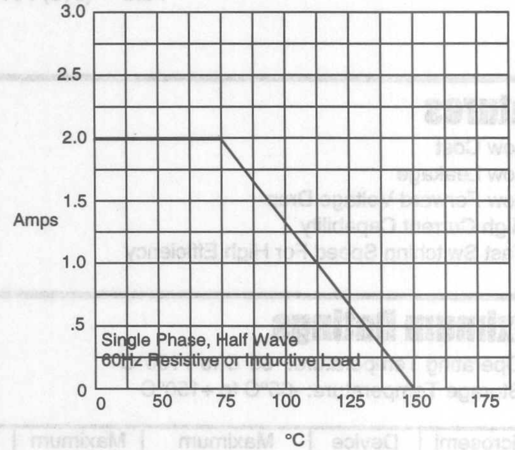
FR201 thru FR207

Figure 1
Typical Forward Characteristics



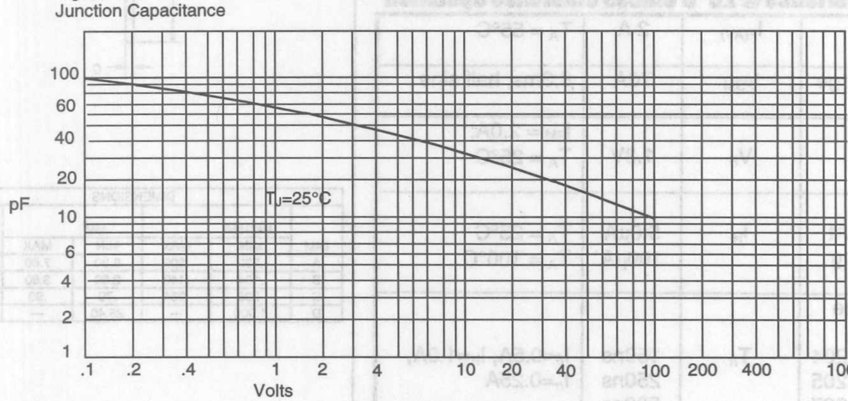
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



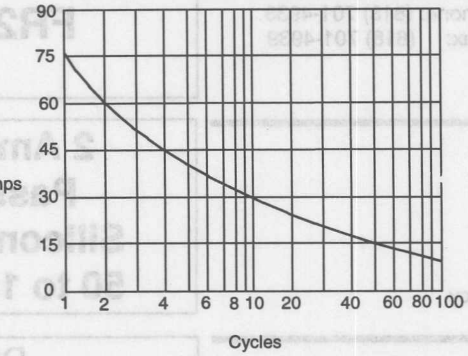
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



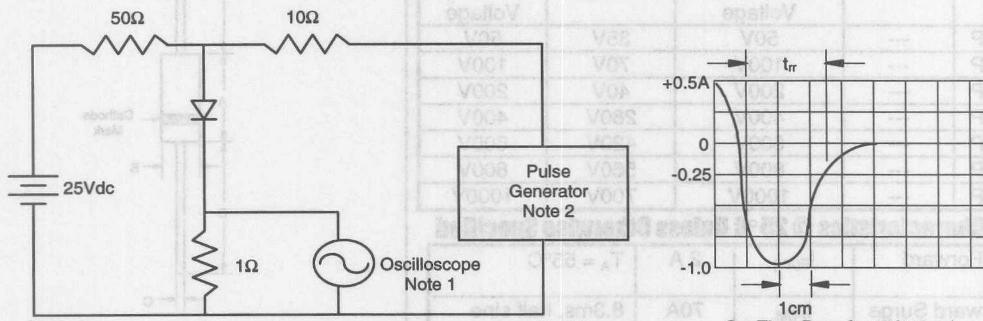
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

THRU FR207GP

2 Amp Glass Passivated Silicon Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency
- Glass Passivated Junction

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

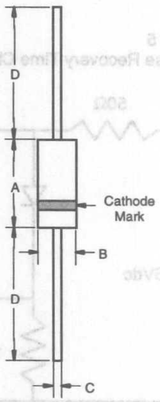
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR201GP	---	50V	35V	50V
FR202GP	---	100V	70V	100V
FR203GP	---	200V	40V	200V
FR204GP	---	400V	280V	400V
FR205GP	---	600V	420V	600V
FR206GP	---	800V	560V	800V
FR207GP	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	70A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 2.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 100µA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time FR201GP-204GP FR205GP FR206GP-207GP	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	40pF	Measured at 1.0MHz, V_R=4.0V

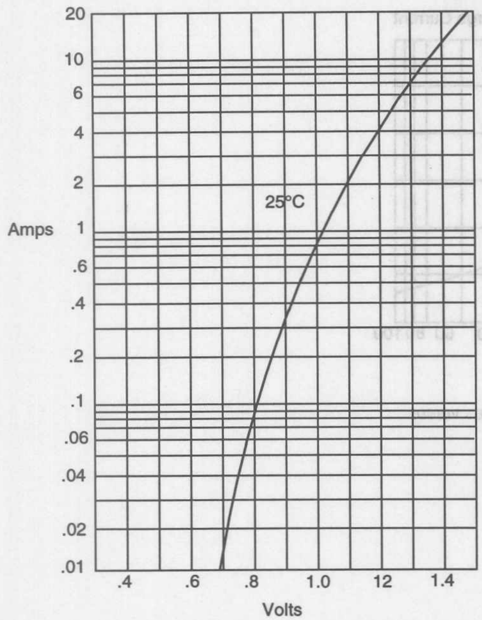
*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

DO-15



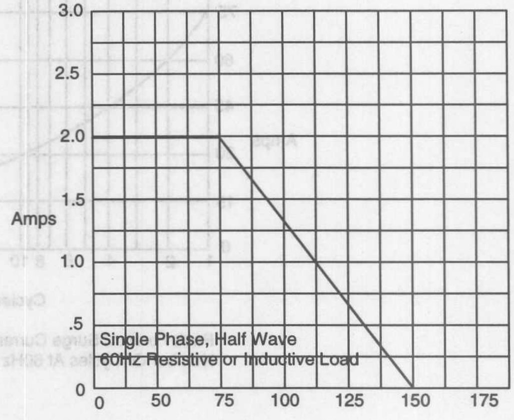
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



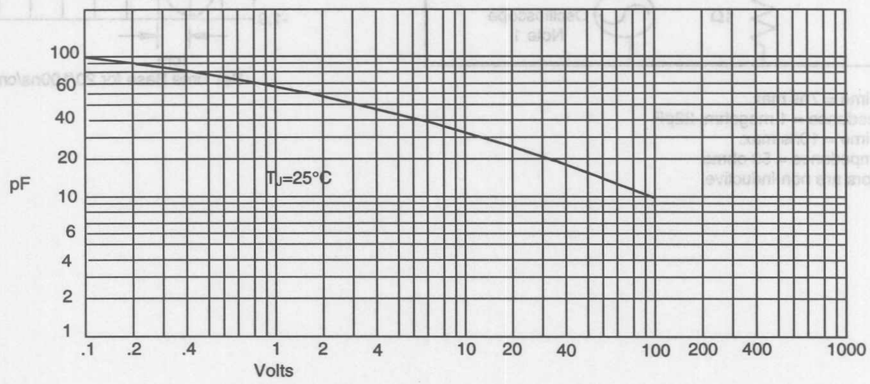
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



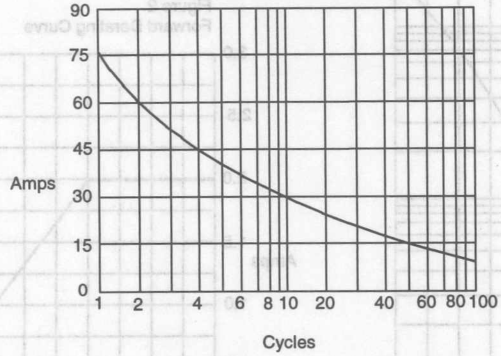
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



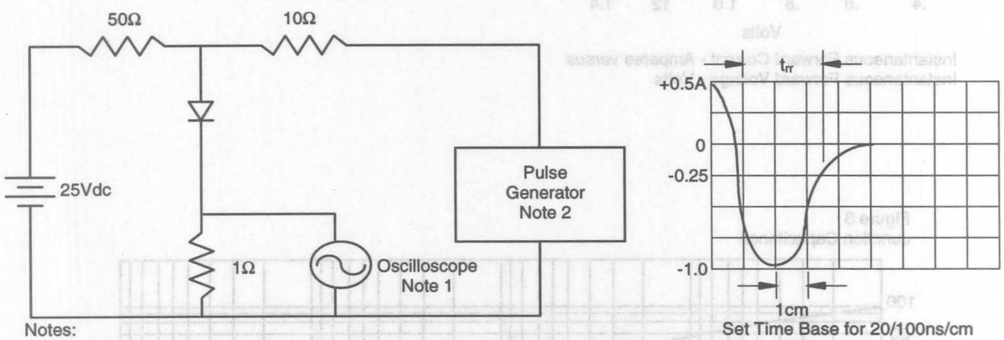
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Chatsworth, CA
Microsemi
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

FR301 THRU FR307

3 Amp Fast Recovery Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

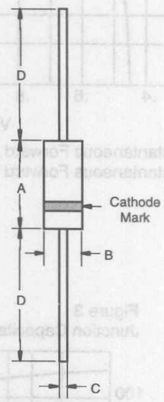
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR301	---	50V	35V	50V
FR302	---	100V	70V	100V
FR303	---	200V	40V	200V
FR304	---	400V	280V	400V
FR305	---	600V	420V	600V
FR306	---	800V	560V	800V
FR307	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	200A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 3.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 150μA	$T_A = 25°C$ $T_A = 55°C$
Maximum Reverse Recovery Time FR301-304 FR305 FR306-307	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	65pF	Measured at 1.0MHz, V_R=4.0V

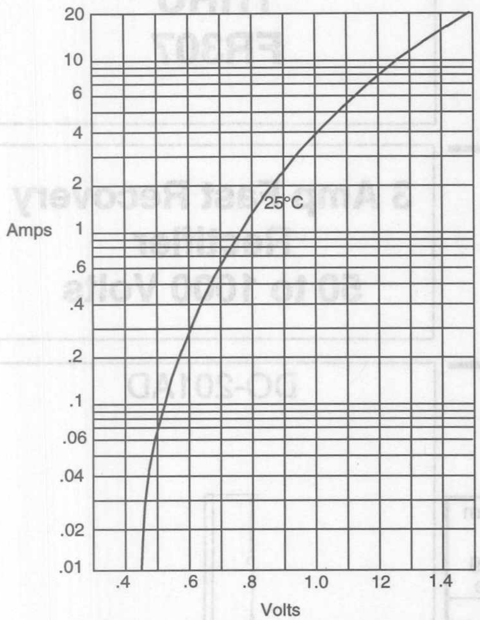
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

DO-201AD



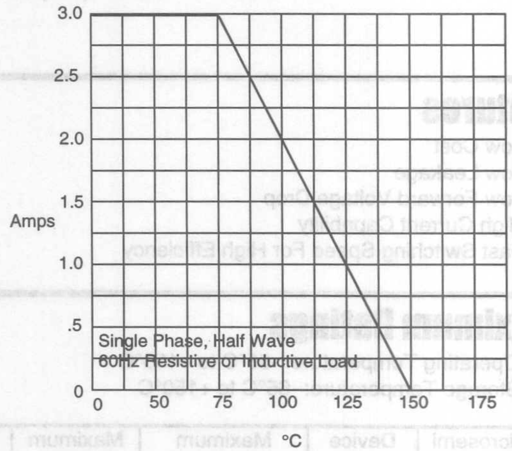
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



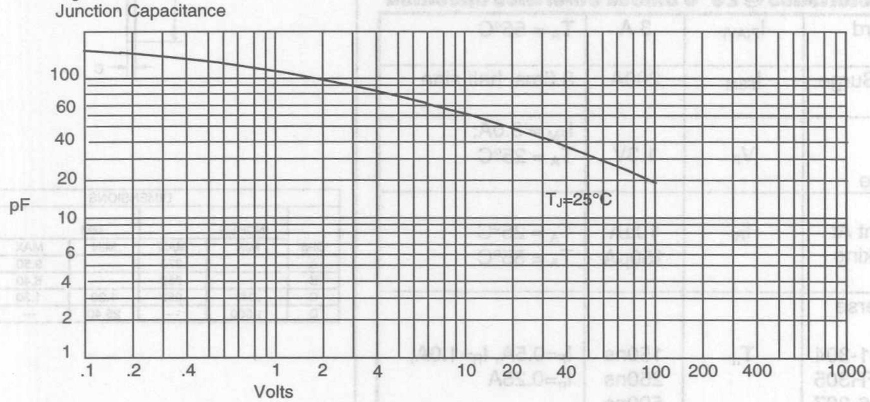
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



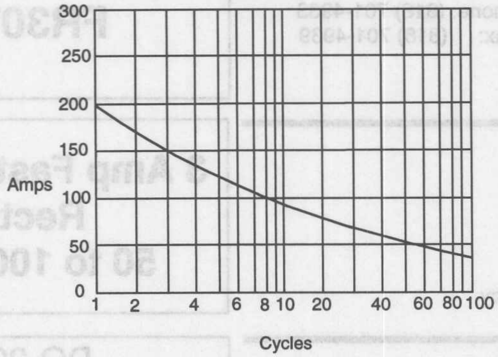
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



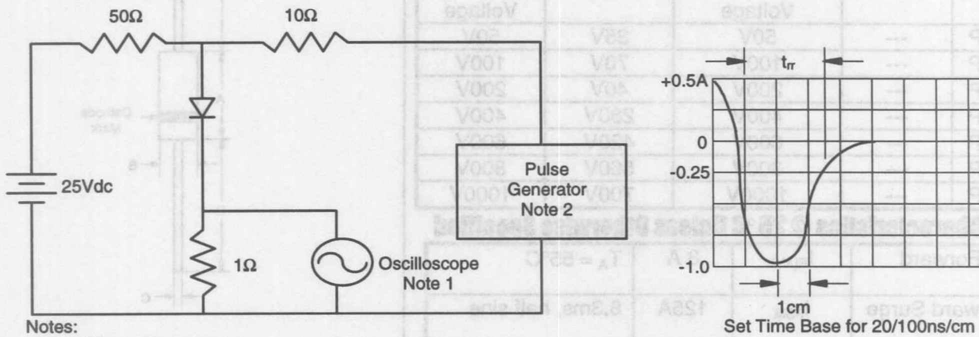
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

THRU FR307GP

3 Amp Fast Recovery Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency
- Glass Passivated Junction

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C

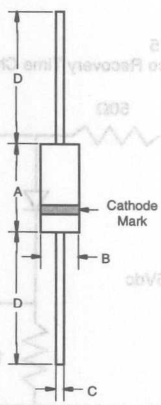
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR301GP	---	50V	35V	50V
FR302GP	---	100V	70V	100V
FR303GP	---	200V	40V	200V
FR304GP	---	400V	280V	400V
FR305GP	---	600V	420V	600V
FR306GP	---	800V	560V	800V
FR307GP	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	125A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 3.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 100µA	$T_A = 25°C$ $T_A = 55°C$
Maximum Reverse Recovery Time FR301GP-304GP FR305GP FR306GP-307GP	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	50pF	Measured at 1.0MHz, V_R=4.0V

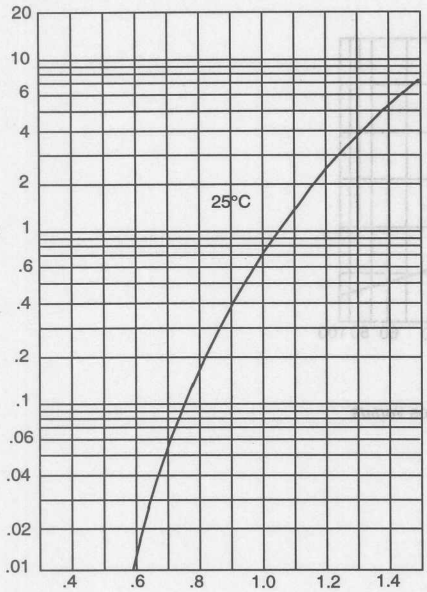
*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

DO-201AD



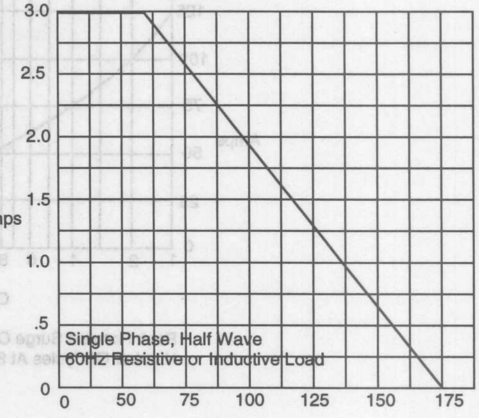
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



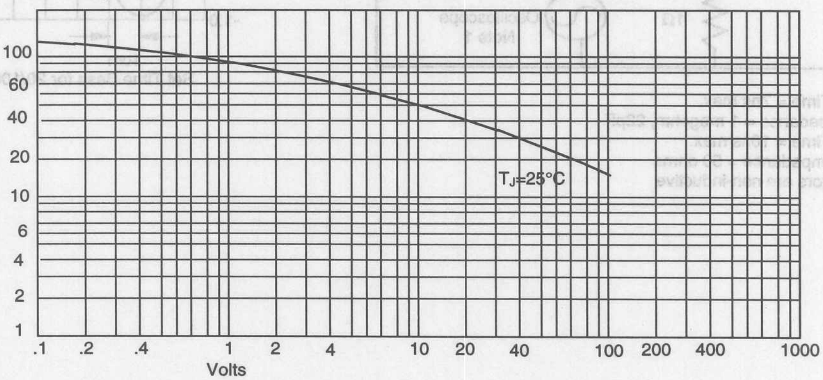
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



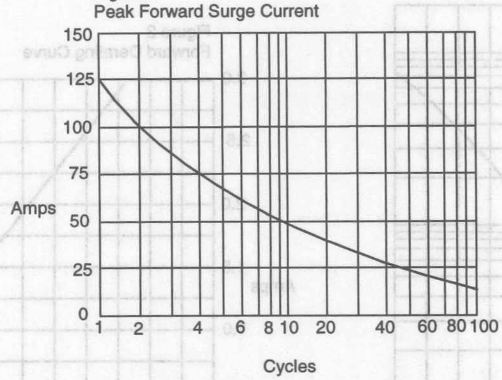
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



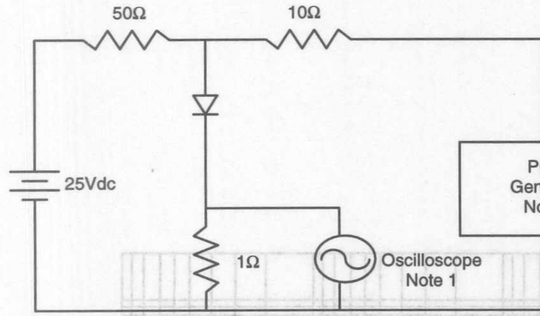
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

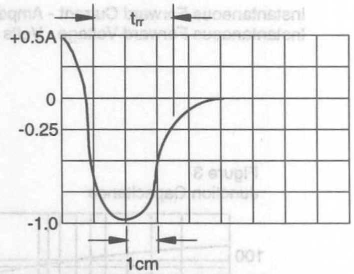
Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram





Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
Chatsworth, CA
Progress Powered by Technology

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Phone: (818) 701-4933
Fax: (818) 701-4939

FR3A THRU FR3M

3 Amp Fast Recovery Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals\
- Fast Recovery Times For High Effieciency

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 10°C/W Junction To Lead

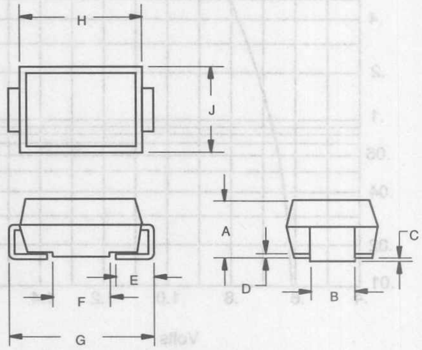
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR3A	FR3A	50V	35V	50V
FR3B	FR3B	100V	70V	100V
FR3D	FR3D	200V	140V	200V
FR3G	FR3G	400V	280V	400V
FR3J	FR3J	600V	420V	600V
FR3K	FR3K	800V	560V	800V
FR3M	FR3M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	T_J = 120°C
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.30V	I_{FM} = 3.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 250μA	T_J = 25°C T_J = 100°C
Maximum Reverse Recovery Time FR3A-J FR3K FR3M	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	80pF	Measured at 1.0MHz, V_R=4.0V

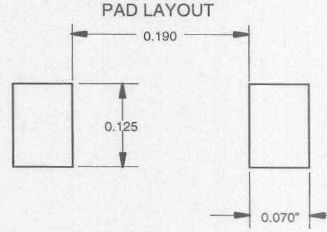
*Pulse test: Pulse width 200 μsec, Duty cycle 2%

DO-214AB
(SMCJ)



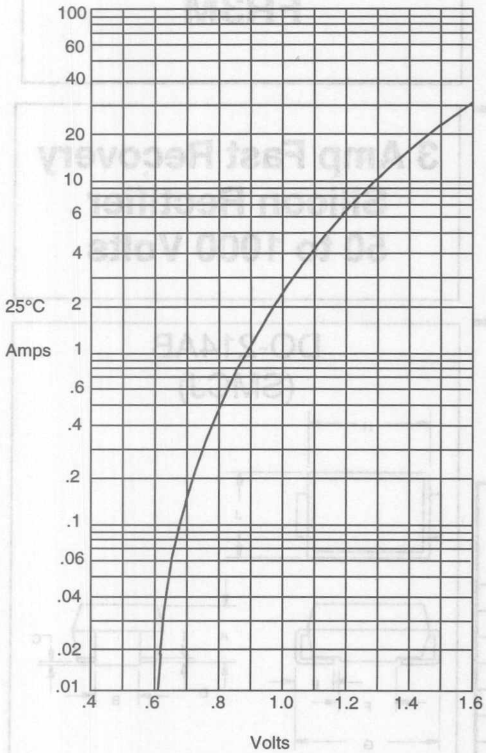
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.075	.095	1.90	2.41	
B	.115	.121	2.92	3.07	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F					
G	.305	.320	7.75	8.13	
H	.260	.280	6.60	7.11	
J	.220	.245	5.59	6.22	

SUGGESTED SOLDER PAD LAYOUT



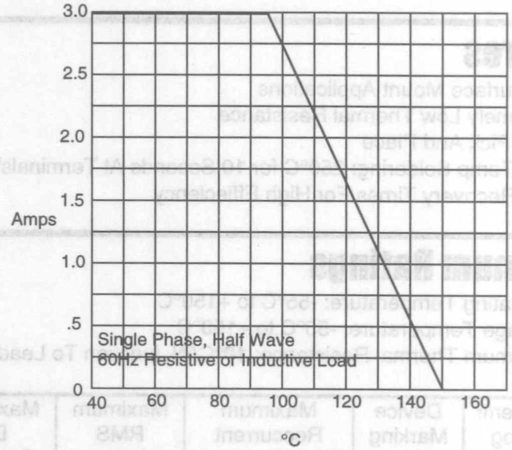
FR3A thru FR3M

Figure 1
Typical Forward Characteristics



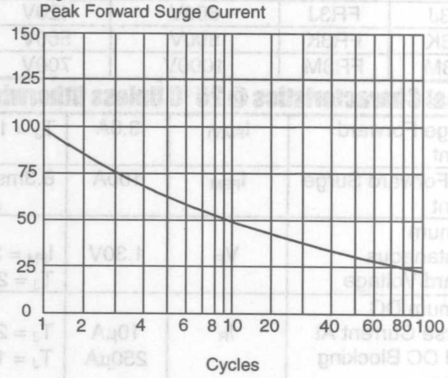
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



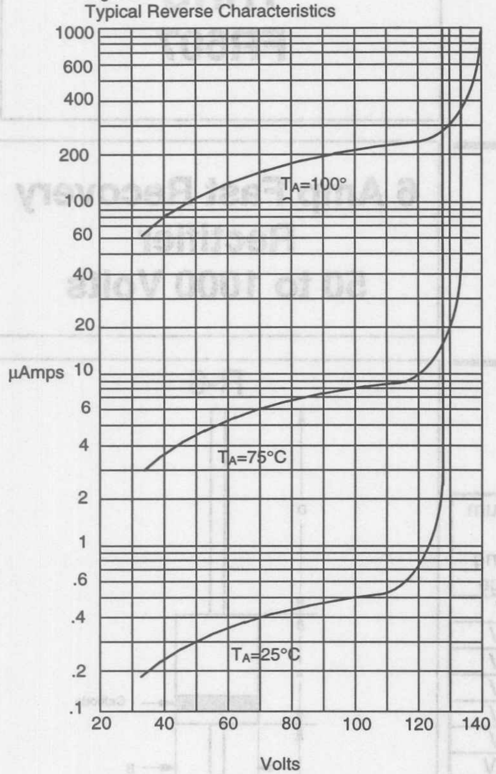
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Peak Forward Surge Current



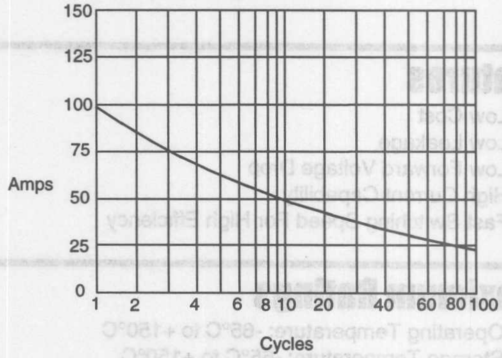
Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 4
Typical Reverse Characteristics



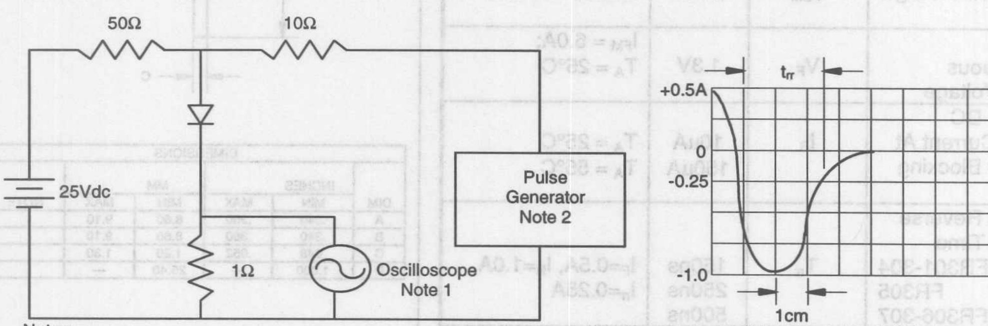
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Set Time Base for 20/100ns/cm

Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
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Phone: (818) 701-4933
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FR601 THRU FR607

6 Amp Fast Recovery Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

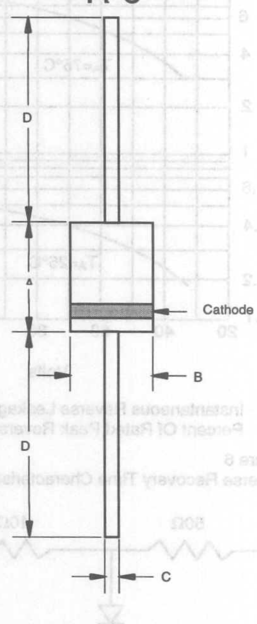
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR601	---	50V	35V	50V
FR602	---	100V	70V	100V
FR603	---	200V	40V	200V
FR604	---	400V	280V	400V
FR605	---	600V	420V	600V
FR606	---	800V	560V	800V
FR607	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 6.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 150µA	$T_A = 25°C$ $T_A = 55°C$
Maximum Reverse Recovery Time FR301-304 FR305 FR306-307	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	150pF	Measured at 1.0MHz, V_R=4.0V

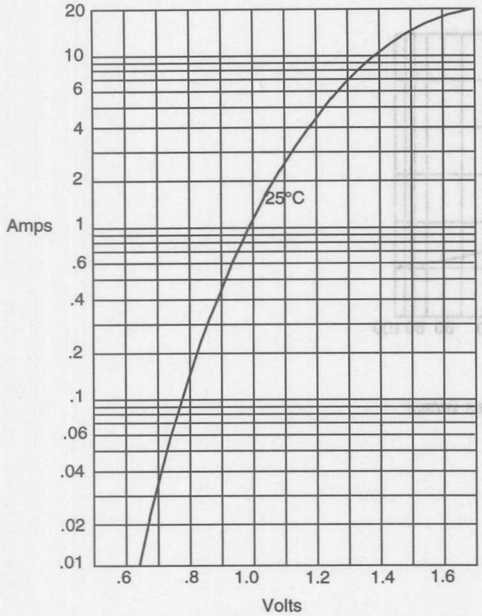
*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

R-6



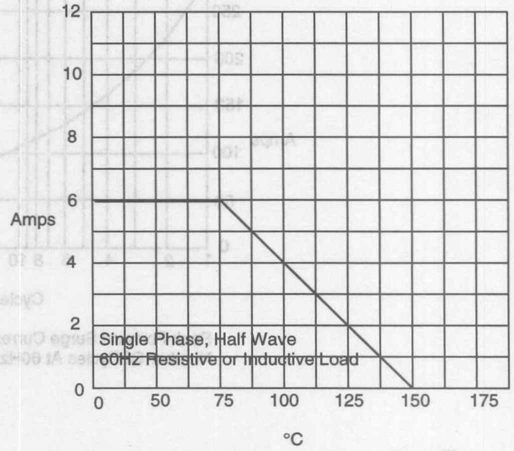
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.340	.360	8.60	9.10	
B	.340	.360	8.60	9.10	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



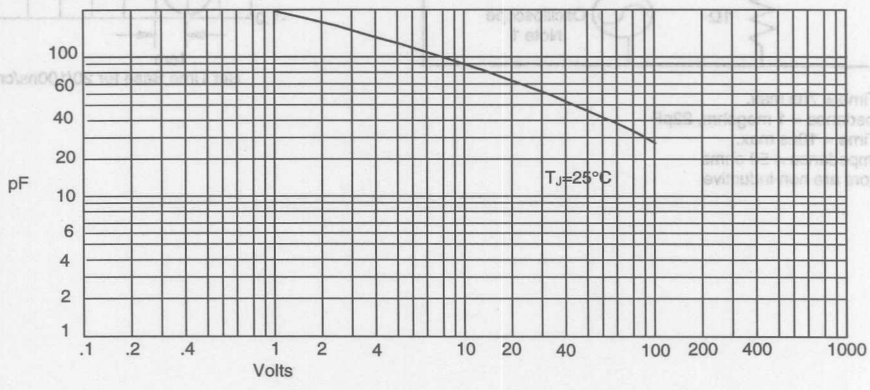
Instantaneous Forward Current - Amperes *versus* Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



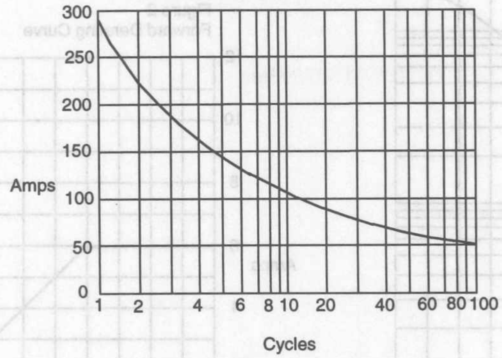
Average Forward Rectified Current - Amperes *versus* Ambient Temperature - °C

Figure 3
Junction Capacitance



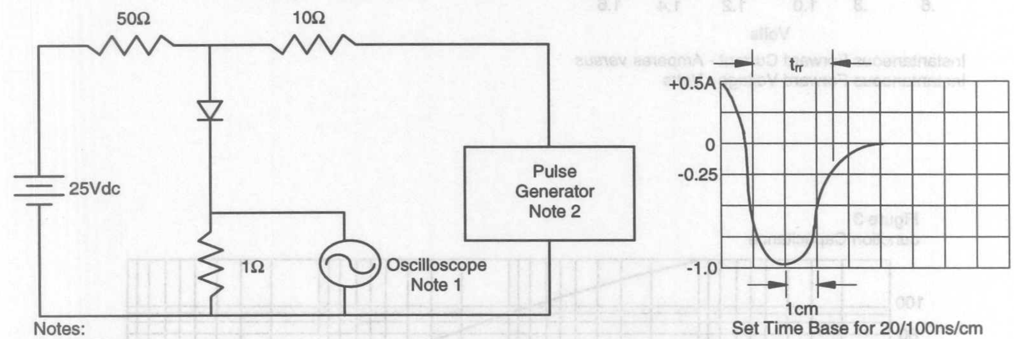
Junction Capacitance - pF *versus* Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Chatsworth, CA
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Phone: (818) 701-4933
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FR601GP THRU FR607GP

6 Amp Glass Passivated Fast Recovery Rectifier 50 to 1000 Volts

Features

- Glass Passivated Junction
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

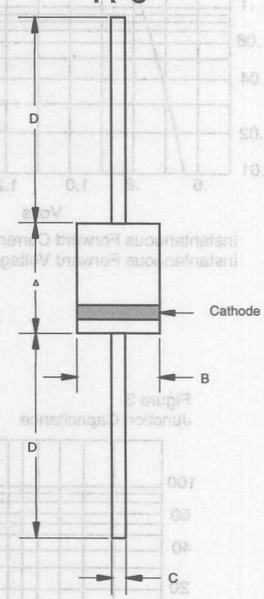
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FR601GP	---	50V	35V	50V
FR602GP	---	100V	70V	100V
FR603GP	---	200V	40V	200V
FR604GP	---	400V	280V	400V
FR605GP	---	600V	420V	600V
FR606GP	---	800V	560V	800V
FR607GP	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.3V	$I_{FM} = 6.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 150µA	$T_A = 25°C$ $T_A = 55°C$
Maximum Reverse Recovery Time FR301-304 FR305 FR306-307	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	150pF	Measured at 1.0MHz, V_R=4.0V

*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

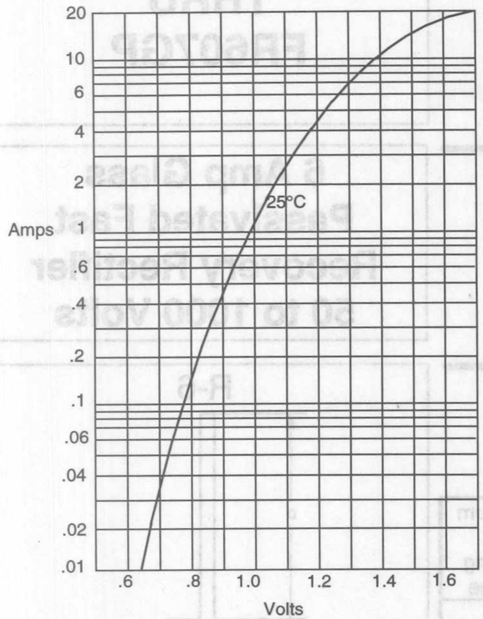
R-6



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.340	.360	8.60	9.10	
B	.340	.360	8.60	9.10	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

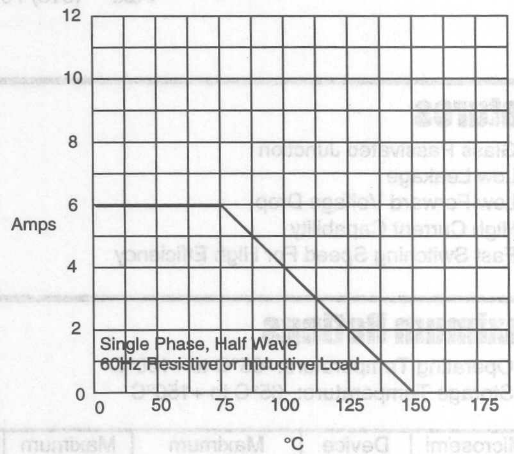
FR601GP thru FR607GP

Figure 1
Typical Forward Characteristics



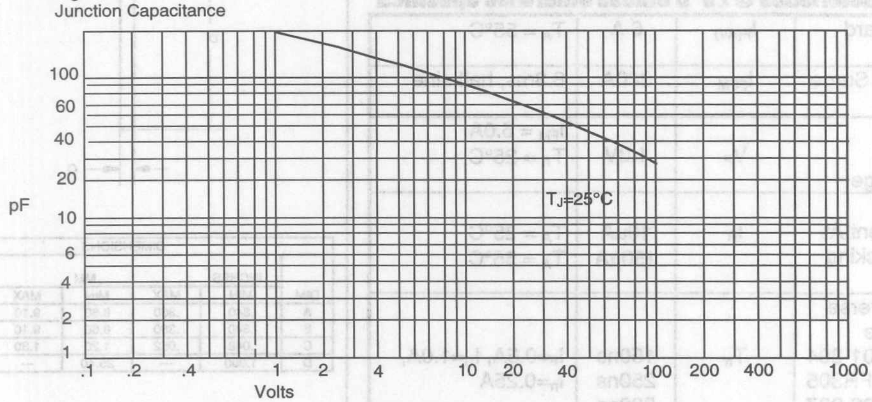
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



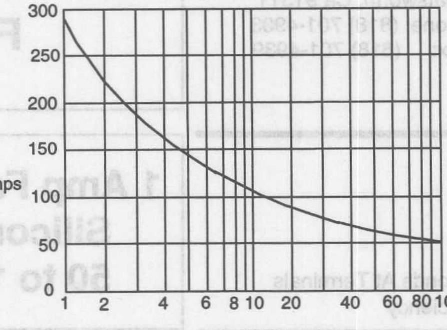
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



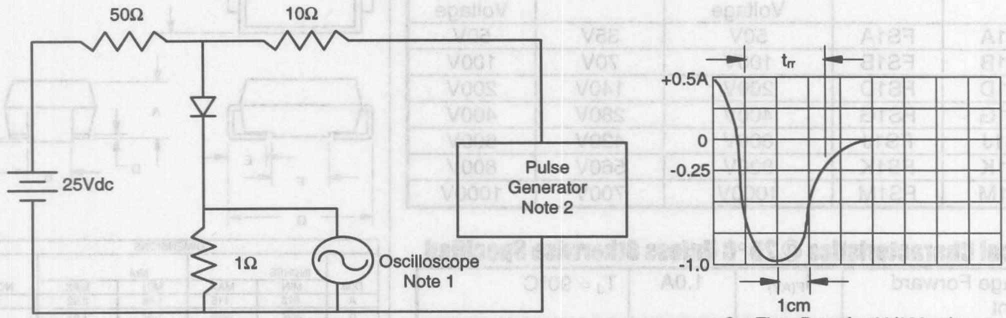
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Chatsworth, CA
Microsemi
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Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

FS1A THRU FS1M

1 Amp Fast Recovery Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals
- Superfast Recovery Times For High Efficiency

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

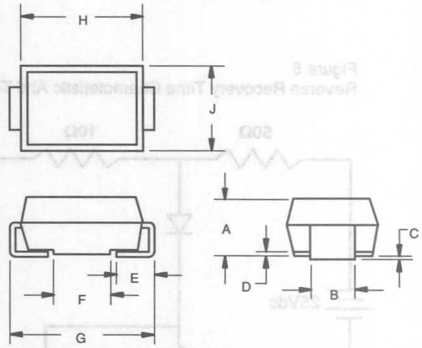
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
FS1A	FS1A	50V	35V	50V
FS1B	FS1B	100V	70V	100V
FS1D	FS1D	200V	140V	200V
FS1G	FS1G	400V	280V	400V
FS1J	FS1J	600V	420V	600V
FS1K	FS1K	800V	560V	800V
FS1M	FS1M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	1.0A	$T_J = 90°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.30V	$I_{FM} = 2.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 200µA	$T_J = 25°C$ $T_J = 125°C$
Maximum Reverse Recovery Time FS1A-G FS1J FS1K-M	T_{rr}	150ns 250ns 500ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	50pF	Measured at 1.0MHz, V_R=4.0V

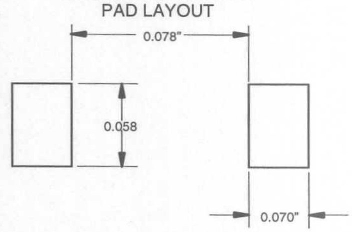
*Pulse test: Pulse width 200 µsec, Duty cycle 2%

DO-214AC (SMAJ)



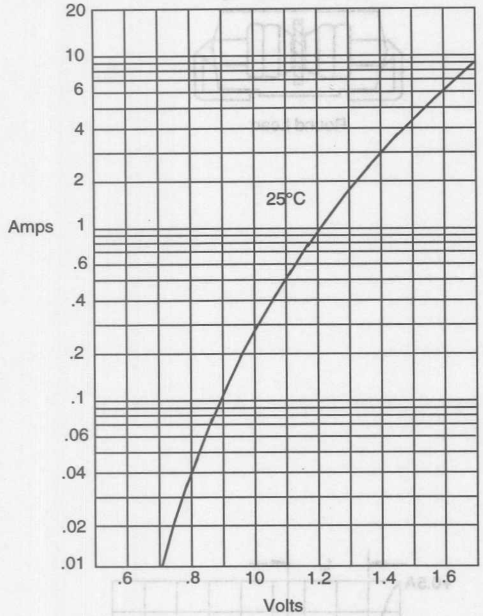
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.078	.115	1.98	2.92	1
B	.052	.058	1.32	1.47	
C	---	.005	---	.127	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.194	.216	4.93	5.48	
H	.157	.177	3.99	4.50	
J	.100	.110	2.57	2.79	

SUGGESTED SOLDER PAD LAYOUT



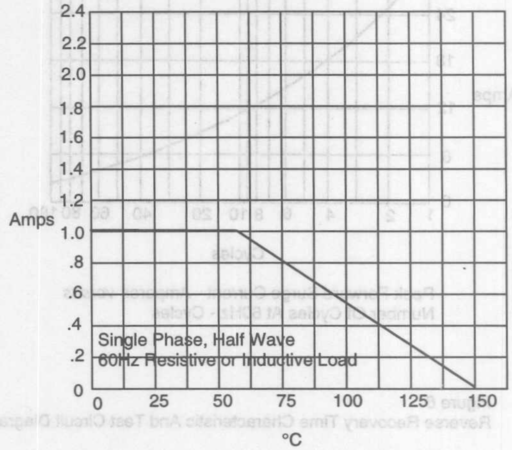
FS1A thru FS1M

Figure 1
Typical Forward Characteristics



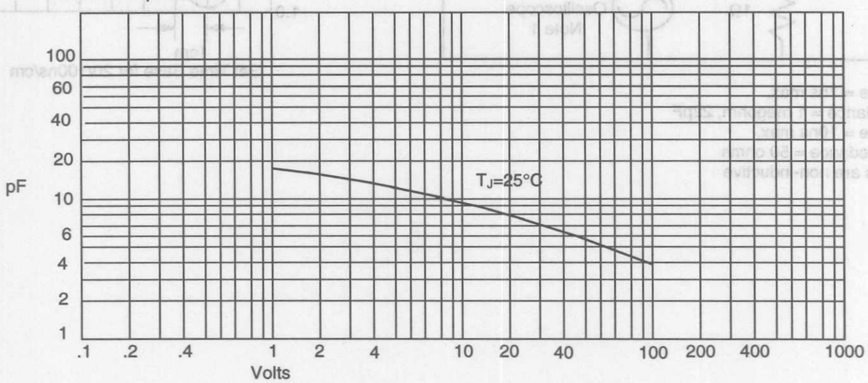
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



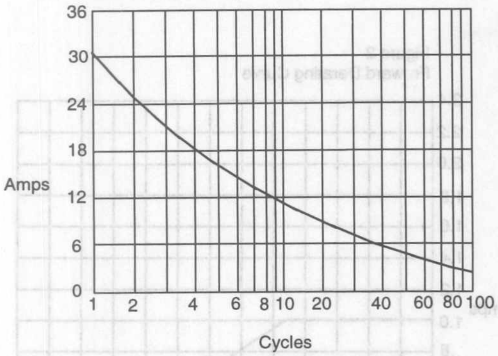
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



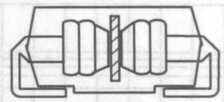
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Peak Forward Surge Current



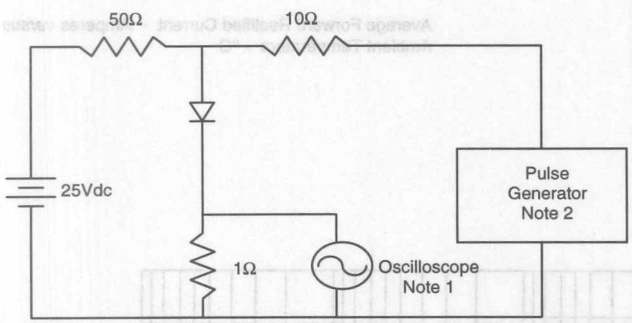
Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

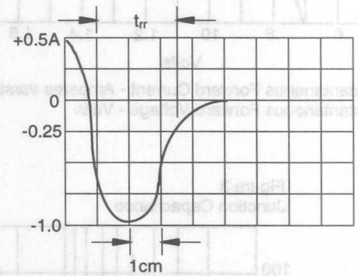
Figure 5
New SMA Assembly



Round Lead

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram





Set Time Base for 20/100ns/cm

Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Chatsworth, CA
Microsemi
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

GS1A THRU GS1M

1 Amp Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

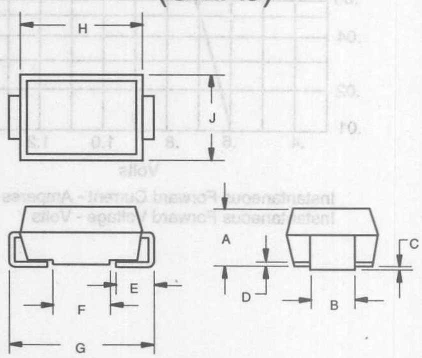
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
GS1A	GS1A	50V	35V	50V
GS1B	GS1B	100V	70V	100V
GS1D	GS1D	200V	140V	200V
GS1G	GS1G	400V	280V	400V
GS1J	GS1J	600V	420V	600V
GS1K	GS1K	800V	560V	800V
GS1M	GS1M	1000V	700V	1000V

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	1.0A	$T_J = 75°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine, $T_J = 150°C$
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 50µA	$T_J = 25°C$ $T_J = 125°C$
Maximum Reverse Recovery Time	T_{rr}	1.8µs	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

DO-214AC (SMAJ)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.078	.115	1.98	2.92	1
B	.052	.058	1.32	1.47	
C	---	.005	---	.127	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.194	.216	4.93	5.48	
H	.157	.177	3.99	4.50	
J	.100	.110	2.57	2.79	

SUGGESTED SOLDER PAD LAYOUT

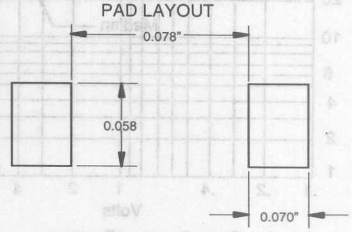
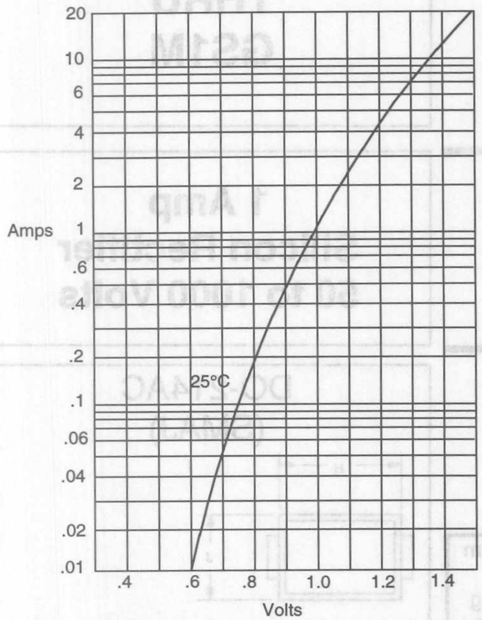
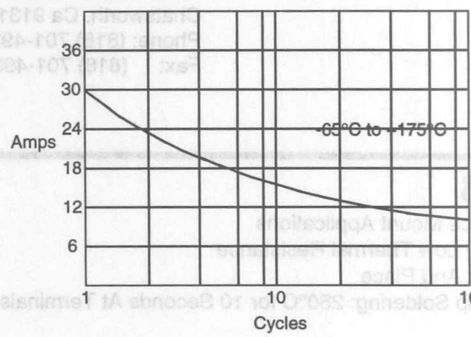


Figure 1
Typical Forward Characteristics



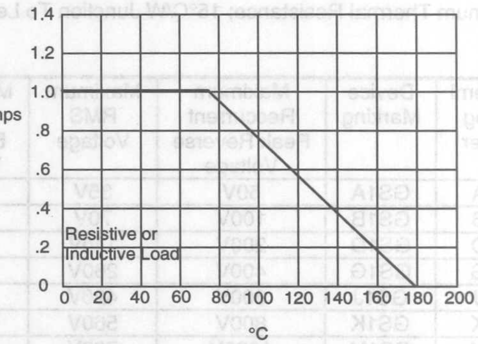
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 3
Maximum Overload Surge Current



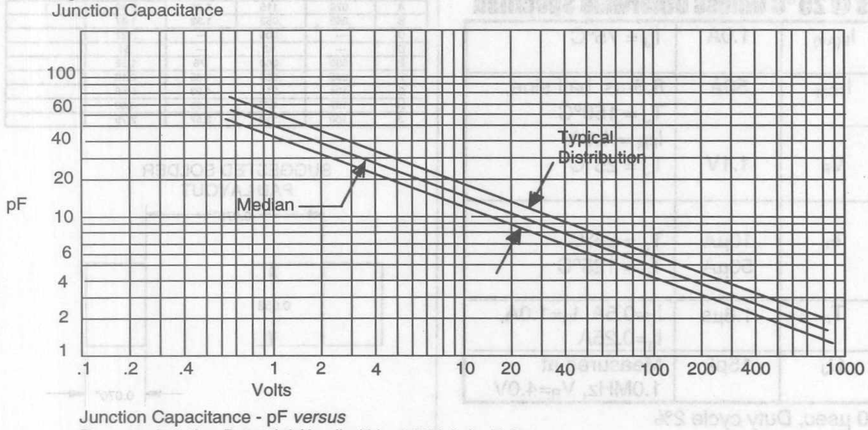
Peak Forward Current - Amperes *versus*
Number of Cycles at 60Hz

Figure 4
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

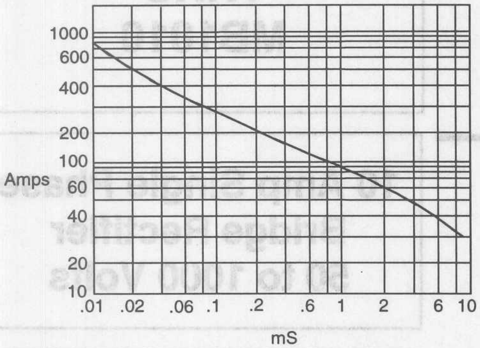
Figure 2
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts

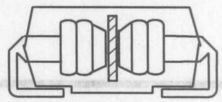
GS1A thru GS1M

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Pulse Duration - Milliseconds (mS)

Figure 6
New SMA Assembly



Round Lead

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

THRU MB1010

10 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

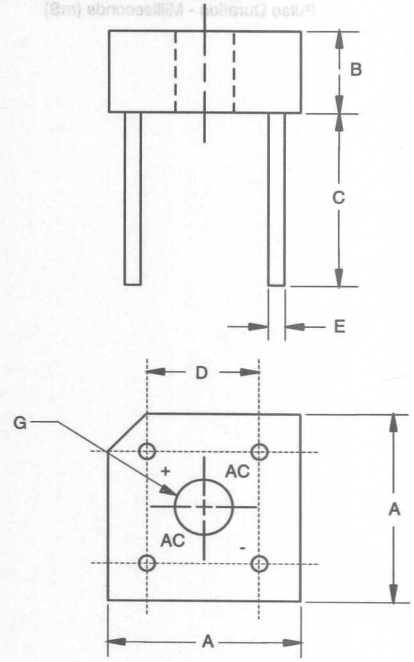
- Low Forward Voltage Drop
- Ceramic Case
- Any Mounting Position
- Surge Rating Of 150 Amps

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB1005	MB1005	50V	35V	50V
MB101	MB101	100V	70V	100V
MB102	MB102	200V	140V	200V
MB104	MB104	400V	280V	400V
MB106	MB106	600V	420V	600V
MB108	MB108	800V	560V	800V
MB1010	MB1010	1000v	700V	1000v

PB-6



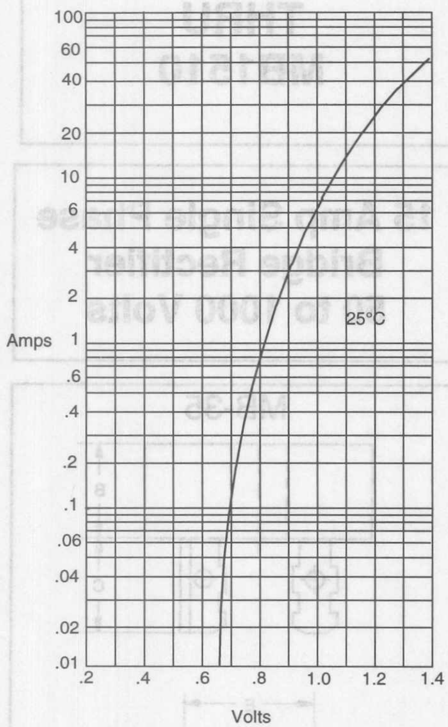
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.610	---	15.50	2PL
B	---	.250	---	6.33	
C	---	.750	---	19.20	
D	.405	.444	10.30	11.30	2PL
E	.040	---	1.00	---	4PL/TYP
G	.145	---	3.70	---	Ø

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	10.0A	$T_J = 75°C$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 5.0A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 1.0mA	$T_J = 25°C$ $T_J = 100°C$

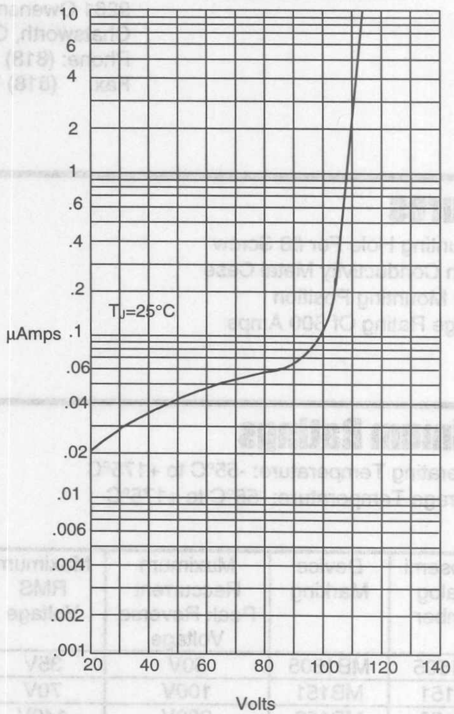
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

Figure 1
Typical Forward Characteristics



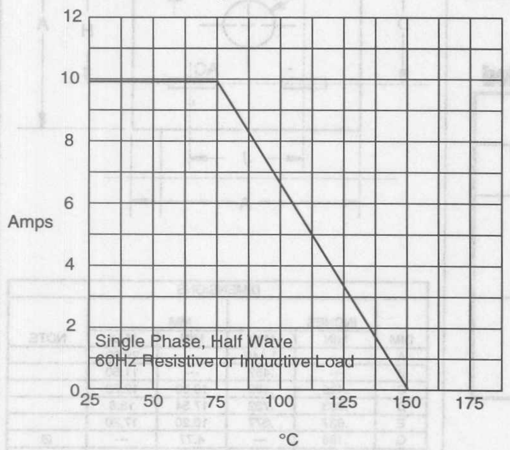
Instantaneous Forward Current - Amperes *versus* Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



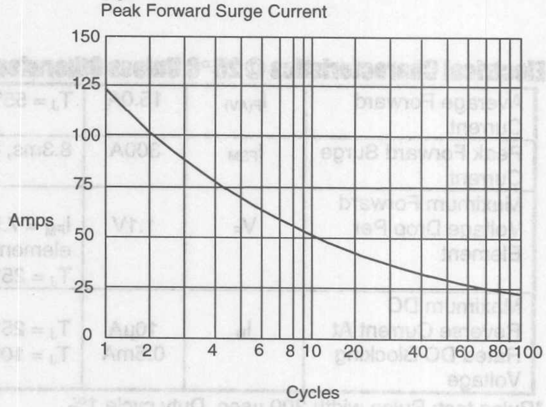
Instantaneous Reverse Leakage Current - MicroAmperes *versus* Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus* Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

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MB1505 THRU MB1510

15 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- High Conductivity Metal Case
- Any Mounting Position
- Surge Rating Of 300 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

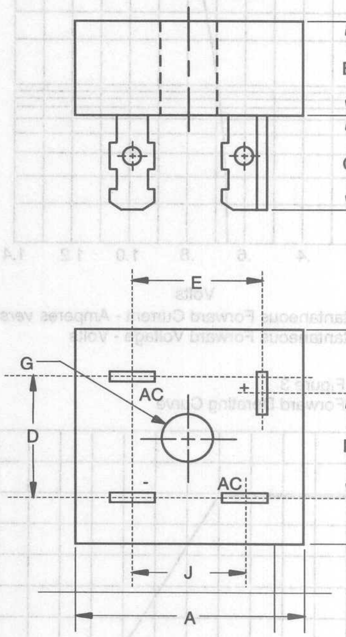
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB1505	MB1505	50V	35V	50V
MB151	MB151	100V	70V	100V
MB152	MB152	200V	140V	200V
MB154	MB154	400V	280V	400V
MB156	MB156	600V	420V	600V
MB158	MB158	800V	560V	800V
MB1510	MB1510	1000v	700V	1000v

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	15.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 7.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

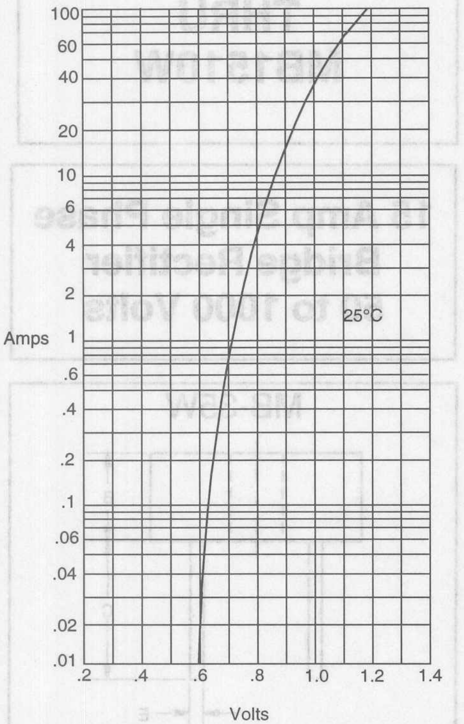
*Pulse test: Pulse width 300 μsec, Duty cycle 1%

MB-35



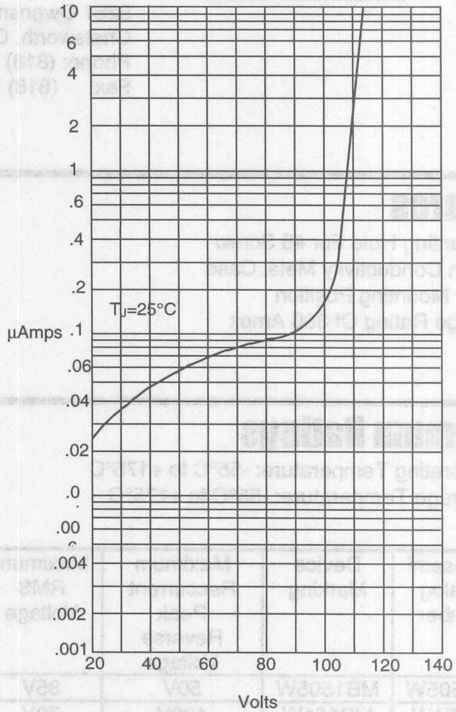
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	.425	.480	10.80	12.20	
D	.693	.732	17.54	18.6	
E	.637	.677	16.20	17.20	
G	.188	---	4.77	---	Ø
H	.633	.673	16.10	17.10	
J	.543	.582	13.80	14.80	

Figure 1
Typical Forward Characteristics



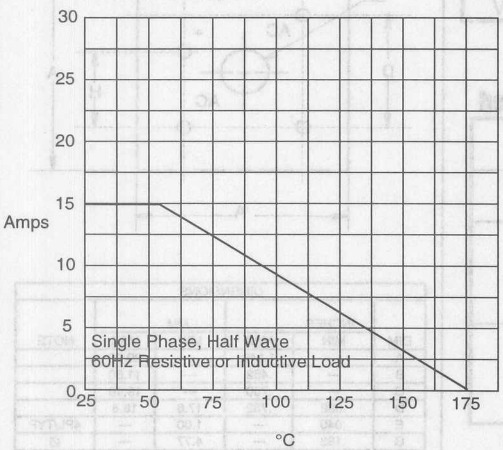
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



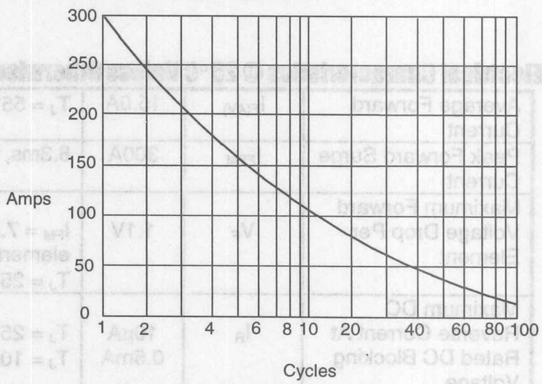
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi
Chatsworth, CA
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MB1505W THRU MB1510W

15 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- High Conductivity Metal Case
- Any Mounting Position
- Surge Rating Of 300 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

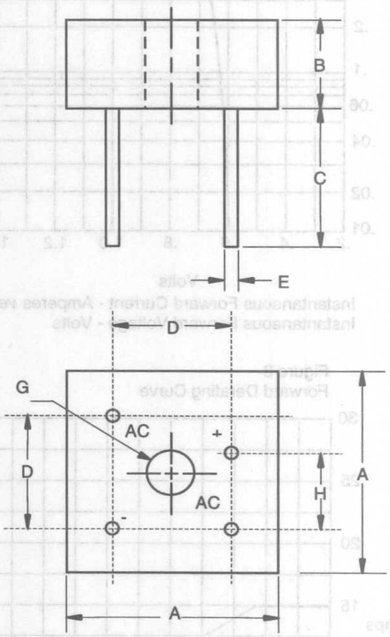
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB1505W	MB1505W	50V	35V	50V
MB151W	MB151W	100V	70V	100V
MB152W	MB152W	200V	140V	200V
MB154W	MB154W	400V	280V	400V
MB156W	MB156W	600V	420V	600V
MB158W	MB158W	800V	560V	800V
MB1510W	MB1510W	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	15.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 7.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

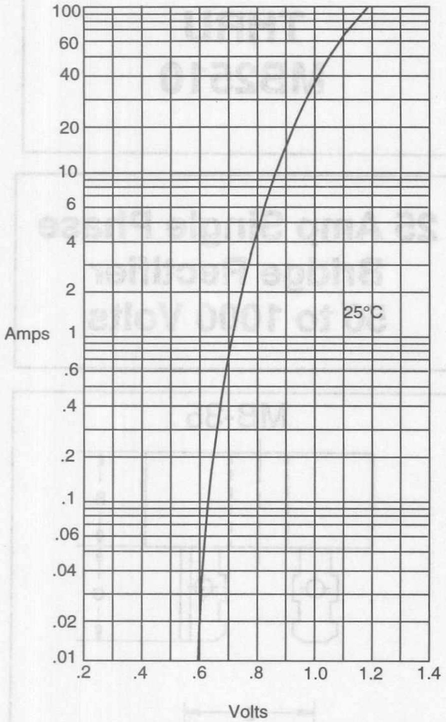
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MB-35W



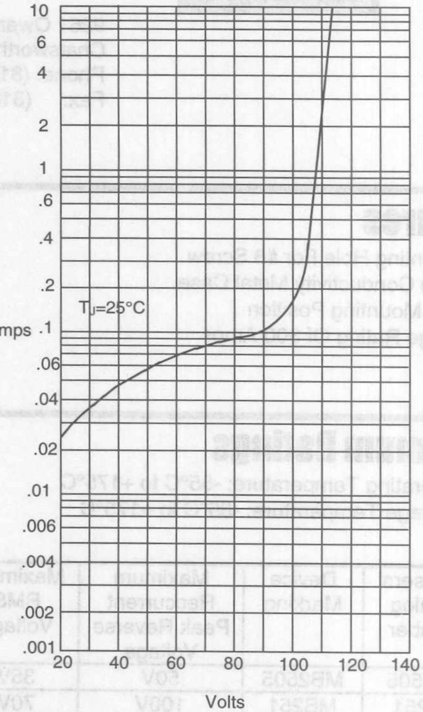
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	---	.750	---	19.10	
D	.692	.732	17.6	18.6	
E	.040	---	1.00	---	4PL/TYP
G	.188	---	4.77	---	Ø
H	.429	.468	10.9	11.9	

Figure 1
Typical Forward Characteristics



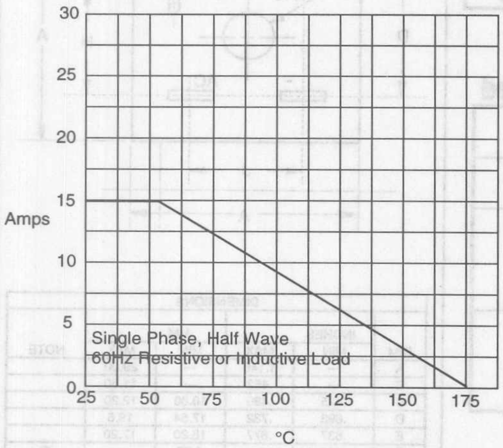
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



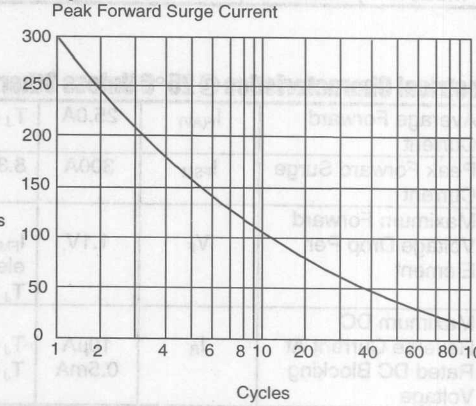
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MB2510

25 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- High Conductivity Metal Case
- Any Mounting Position
- Surge Rating Of 300 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

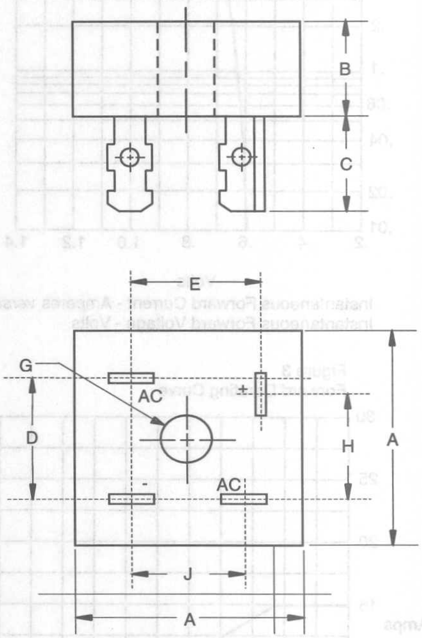
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB2505	MB2505	50V	35V	50V
MB251	MB251	100V	70V	100V
MB252	MB252	200V	140V	200V
MB254	MB254	400V	280V	400V
MB256	MB256	600V	420V	600V
MB258	MB258	800V	560V	800V
MB2510	MB2510	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	25.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 12.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

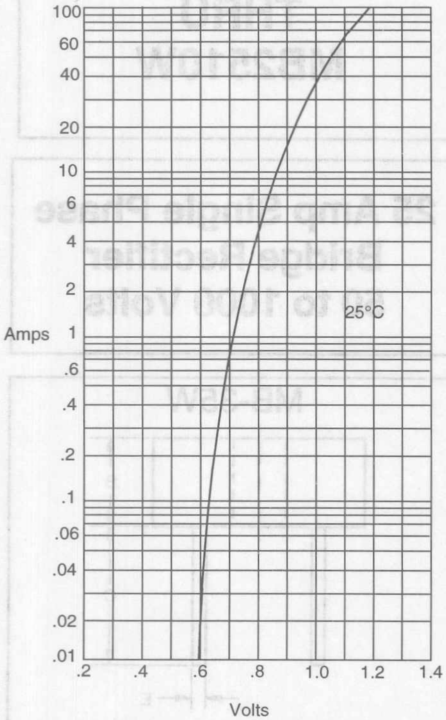
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MB-35



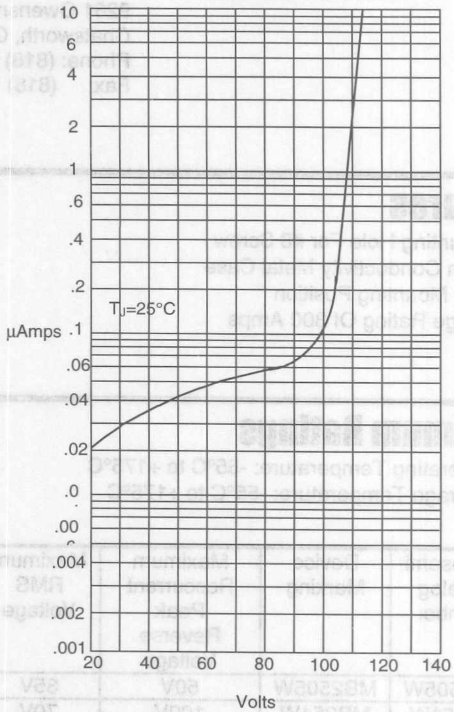
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	.425	.480	10.80	12.20	
D	.693	.732	17.54	18.6	
E	.637	.677	16.20	17.20	
G	.188	---	4.77	---	Ø
H	.633	.673	16.10	17.10	
J	.543	.582	13.80	14.80	

Figure 1
Typical Forward Characteristics



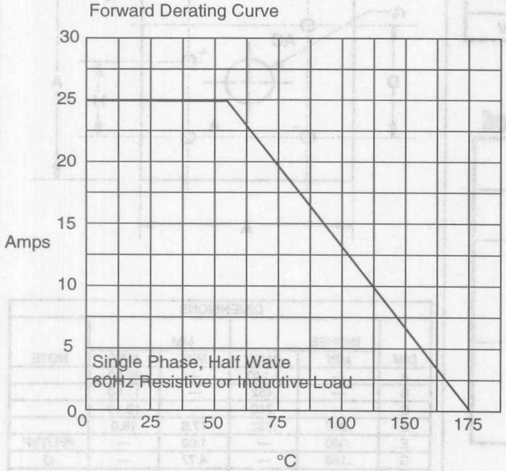
Instantaneous Forward Current - Amperes *versus* Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



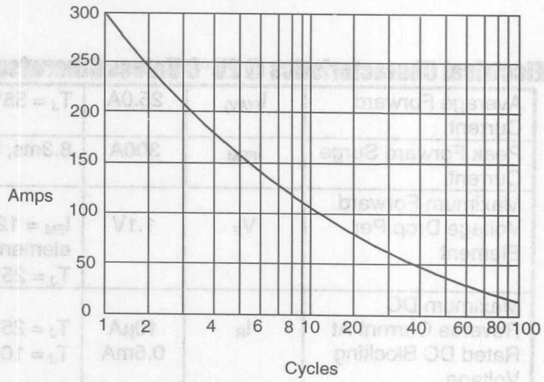
Instantaneous Reverse Leakage Current - MicroAmperes *versus* Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus* Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

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Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MB2505W THRU MB2510W

25 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- High Conductivity Metal Case
- Any Mounting Position
- Surge Rating Of 300 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

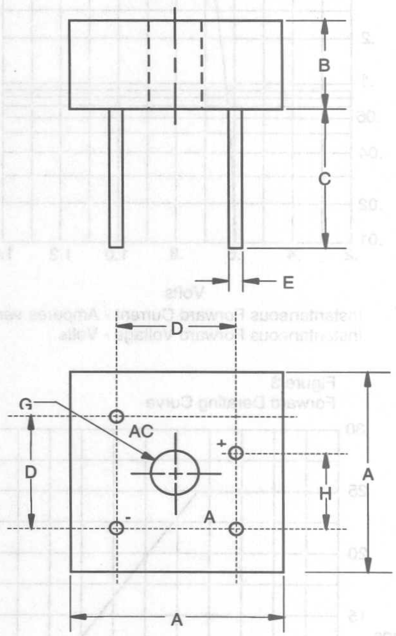
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB2505W	MB2505W	50V	35V	50V
MB251W	MB251W	100V	70V	100V
MB252W	MB252W	200V	140V	200V
MB254W	MB254W	400V	280V	400V
MB256W	MB256W	600V	420V	600V
MB258W	MB258W	800V	560V	800V
MB2510W	MB2510W	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	25.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 12.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

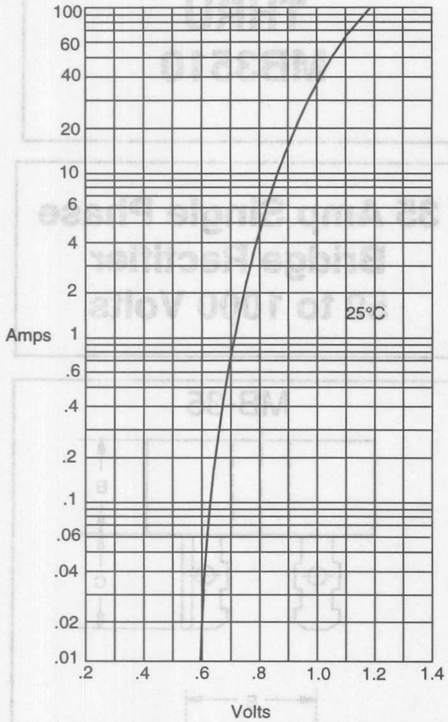
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MB-35W



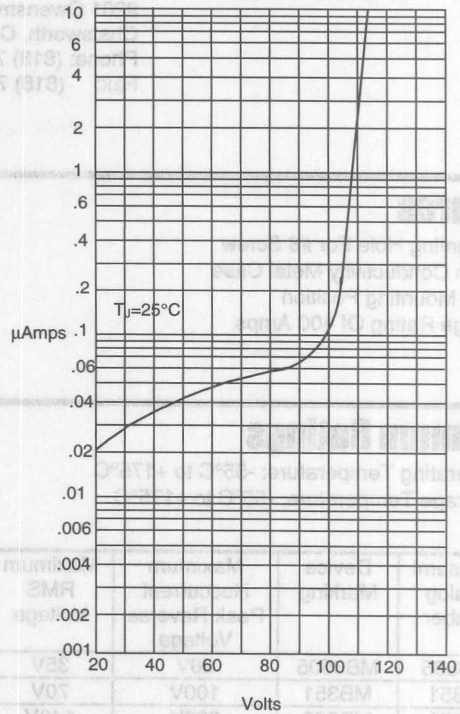
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	---	.750	---	19.10	
D	.692	.732	17.6	18.6	
E	.040	---	1.00	---	4PL/TYP
G	.188	---	4.77	---	Ø
H	.429	.468	10.9	11.9	

Figure 1
Typical Forward Characteristics



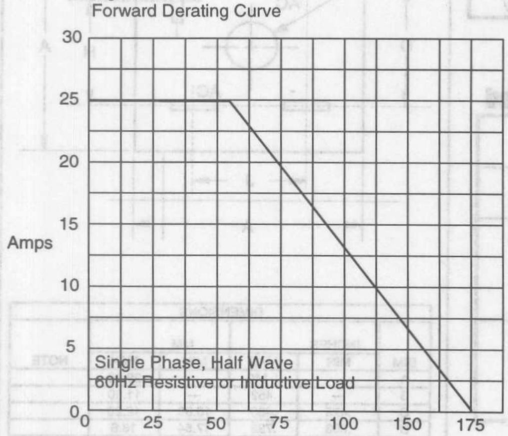
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



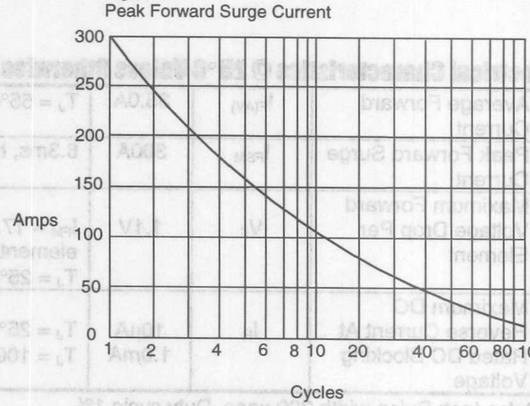
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA
Microsemi
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MB3505 THRU MB3510

35 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- High Conductivity Metal Case
- Any Mounting Position
- Surge Rating Of 400 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

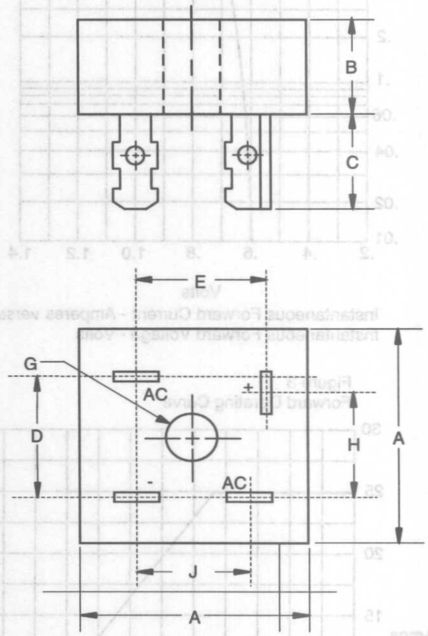
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB3505	MB3505	50V	35V	50V
MB351	MB351	100V	70V	100V
MB352	MB352	200V	140V	200V
MB354	MB354	400V	280V	400V
MB356	MB356	600V	420V	600V
MB358	MB358	800V	560V	800V
MB3510	MB3510	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	35.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 17.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 1.0mA	$T_J = 25°C$ $T_J = 100°C$

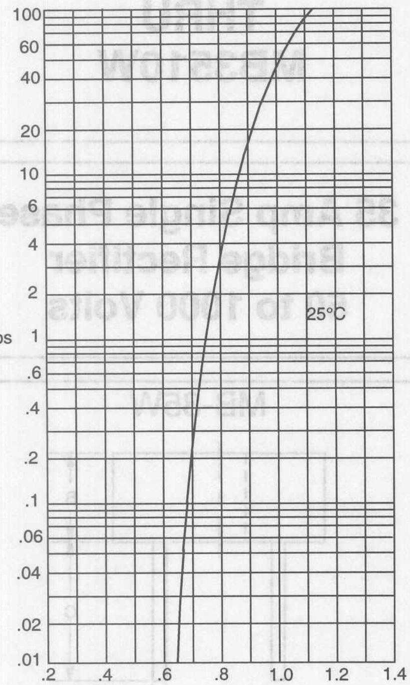
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MB-35



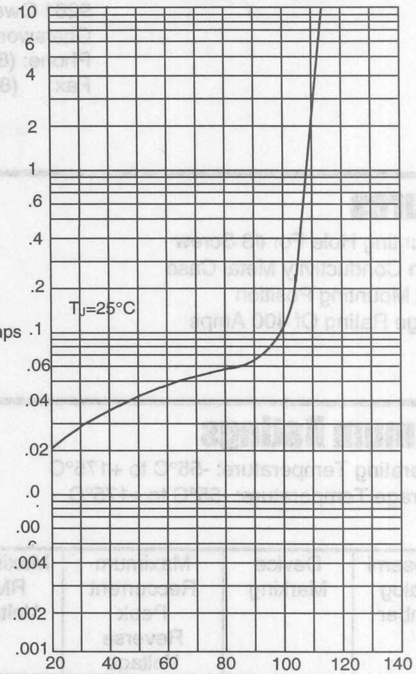
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	.425	.480	10.80	12.20	
D	.693	.732	17.54	18.6	
E	.637	.677	16.20	17.20	
G	.188	---	4.77	---	Ø
H	.633	.673	16.10	17.10	
J	.543	.582	13.80	14.80	

Figure 1
Typical Forward Characteristics



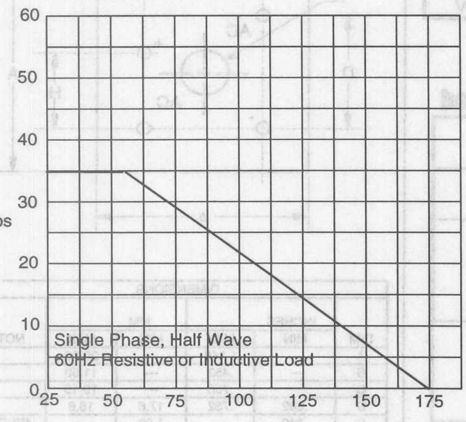
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



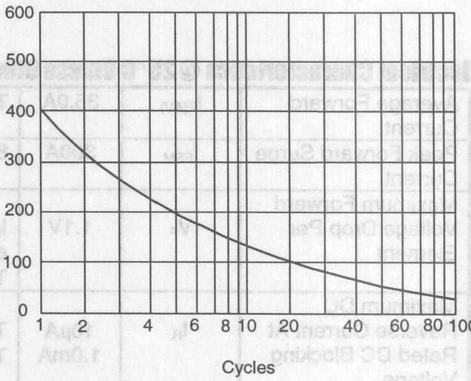
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi
Chatsworth, CA
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Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MB3505W THRU MB3510W

35 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- High Conductivity Metal Case
- Any Mounting Position
- Surge Rating Of 400 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

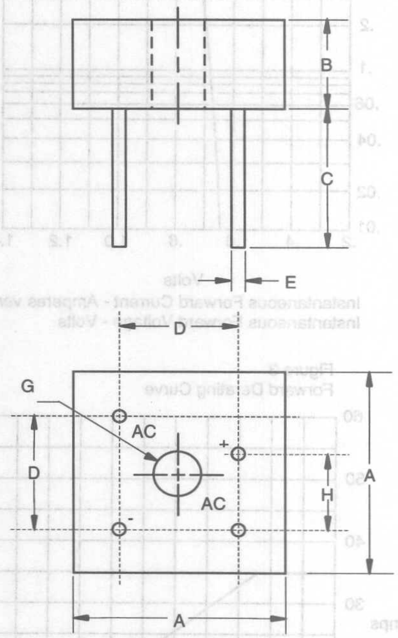
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB3505W	MB3505W	50V	35V	50V
MB351W	MB351W	100V	70V	100V
MB352W	MB352W	200V	140V	200V
MB354W	MB354W	400V	280V	400V
MB356W	MB356W	600V	420V	600V
MB358W	MB358W	800V	560V	800V
MB3510W	MB3510W	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	35.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 17.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 1.0mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 μsec, Duty cycle 1%

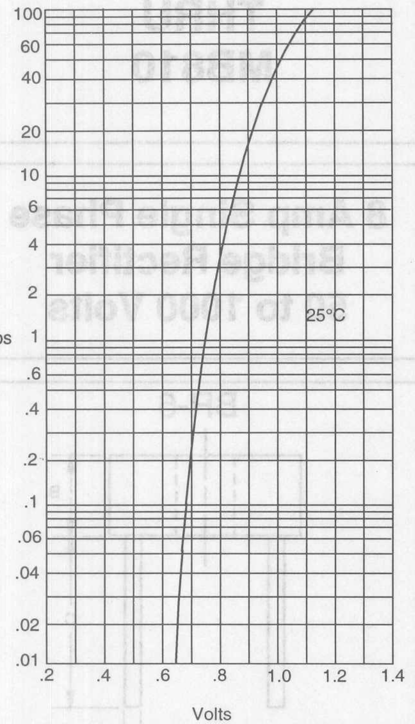
MB-35W



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	---	.750	---	19.10	
D	.692	.732	17.6	18.6	
E	.040	---	1.00	---	4PL/TYP
G	.188	---	4.77	---	Ø
H	.429	.468	10.9	11.9	

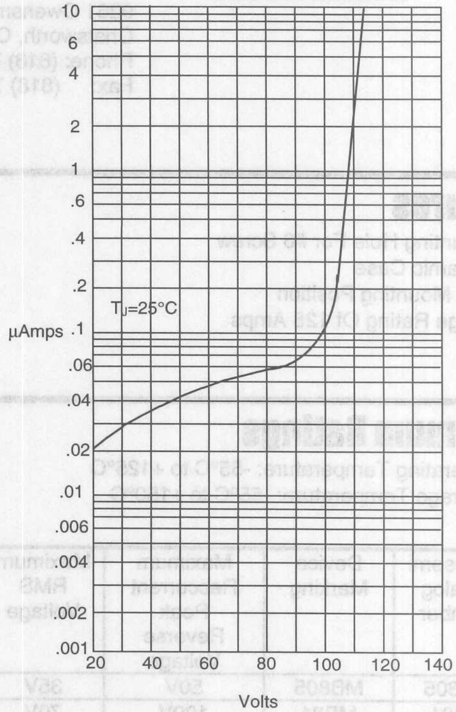
MB3505W thru MB3510W

Figure 1
Typical Forward Characteristics



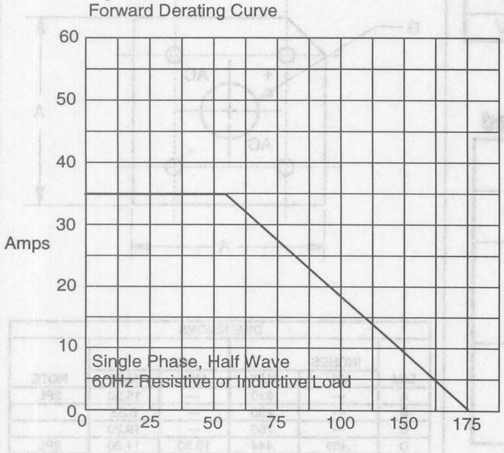
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



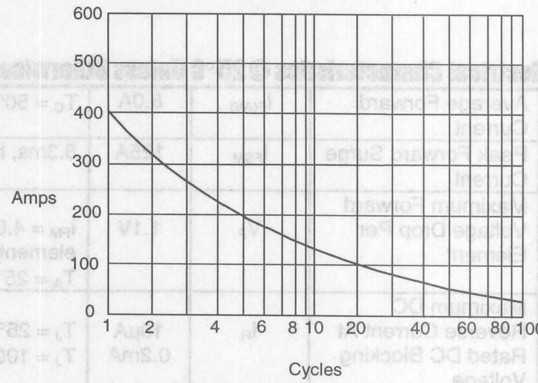
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA
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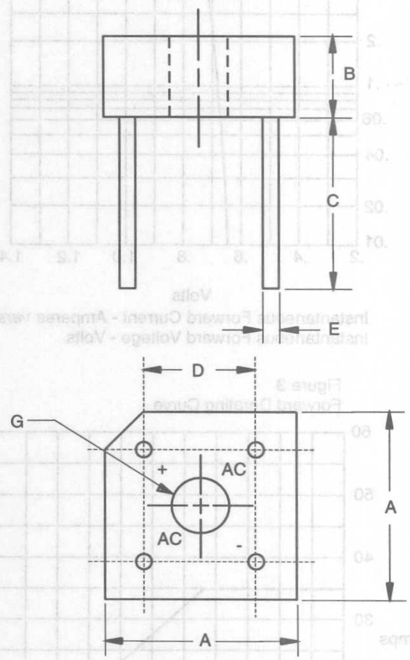
MB805 THRU MB810

8 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

BR-6



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.610	---	15.50	2PL
B	---	.250	---	6.33	
C	---	.750	---	19.20	
D	.405	.444	10.30	11.30	2PL
E	.040	---	1.00	---	4PL/TYP
G	.145	---	3.70	---	Ø

Features

- Mounting Hole For #6 Screw
- Ceramic Case
- Any Mounting Position
- Surge Rating Of 125 Amps

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

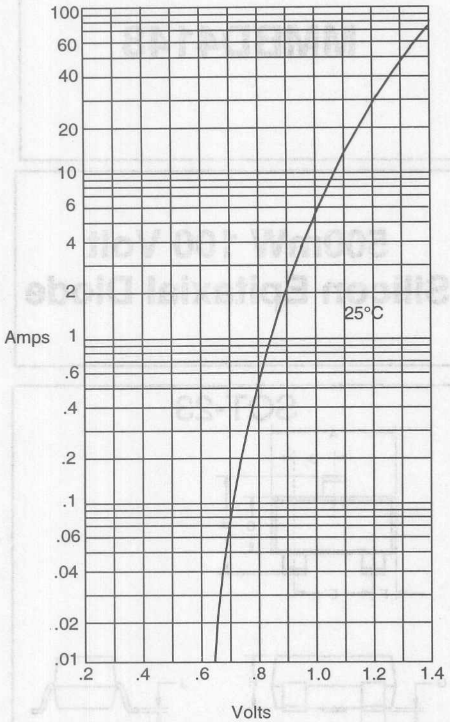
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MB805	MB805	50V	35V	50V
MB81	MB81	100V	70V	100V
MB82	MB82	200V	140V	200V
MB84	MB84	400V	280V	400V
MB86	MB86	600V	420V	600V
MB88	MB88	800V	560V	800V
MB810	MB810	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	8.0A	$T_C = 50°C$
Peak Forward Surge Current	I_{FSM}	125A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 4.0A$ per element; $T_A = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.2mA	$T_J = 25°C$ $T_J = 100°C$

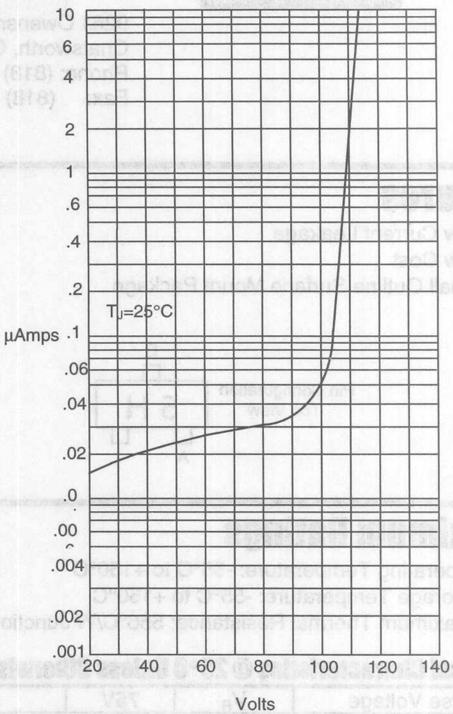
*Pulse test: Pulse width 300 μsec, Duty cycle 1%

Figure 1
Typical Forward Characteristics



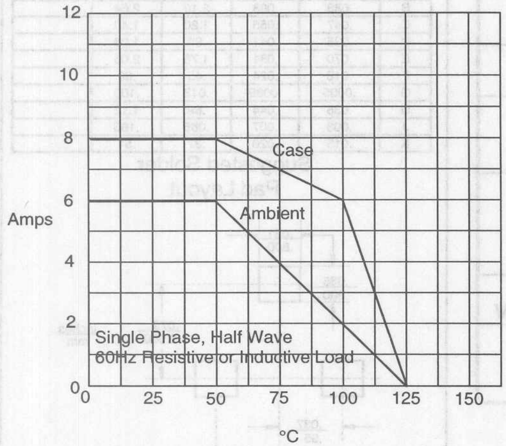
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



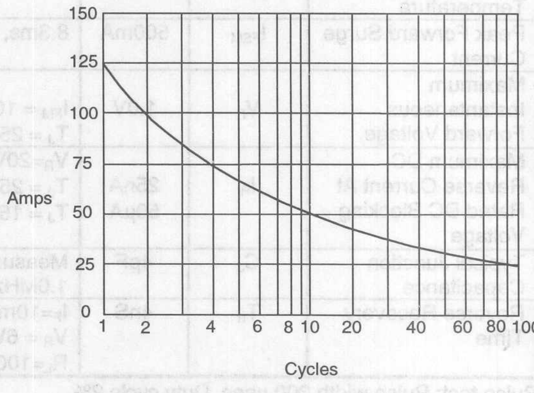
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*

Figure 4
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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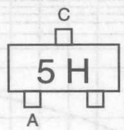
MMBD4148

500mW 100 Volt Silicon Epitaxial Diode

Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package

Pin Configuration
Top View



Maximum Ratings

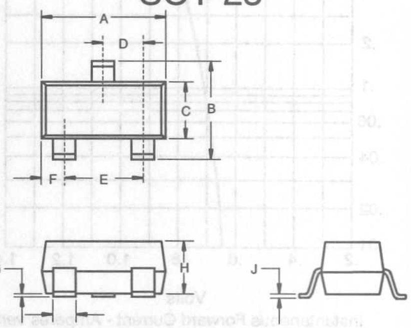
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 556°C/W Junction To Ambient

Electrical Characteristics @ 25°C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_O	150mA	Resistive Load f > 50Hz
Power Dissipation	P_{TOT}	500mW	
Junction Temperature	T_J	200°C	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 50μA	V_R=20Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	4pF	Measured at 1.0MHz, V_R=4.0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 6V R_L=100Ω

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

SOT-23



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

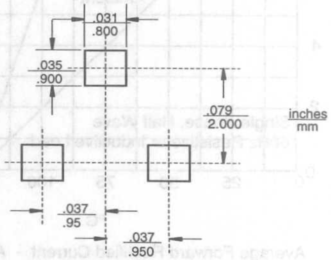
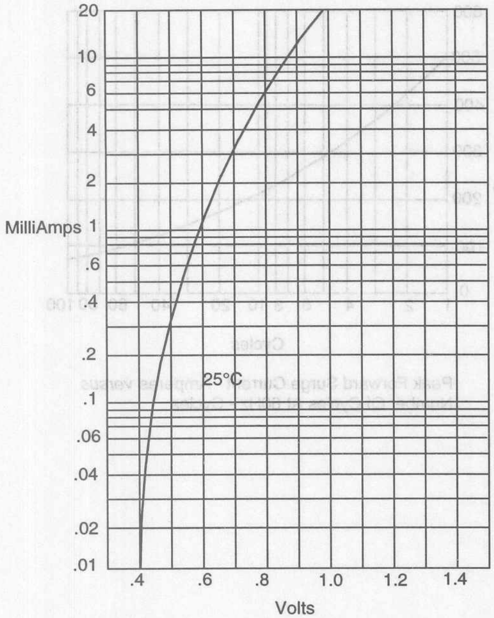
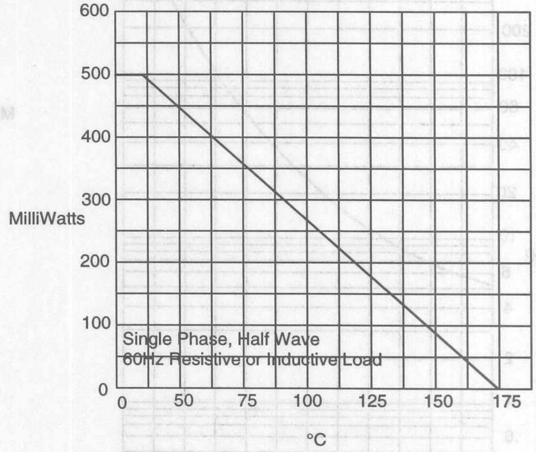


Figure 1
Typical Forward Characteristics



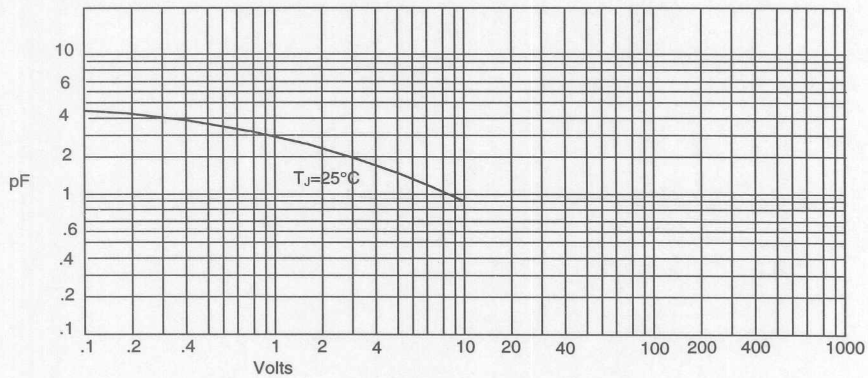
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



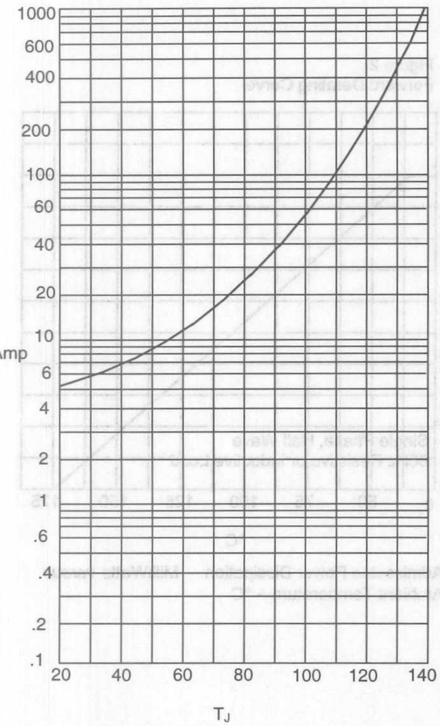
Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



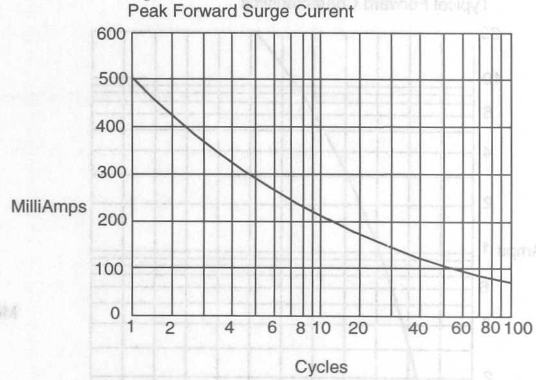
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes *versus*
Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Fax: (818) 701-4939

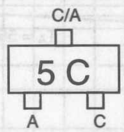
MMBD7000

300mW 100Volt Dual Switching Diode

Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package

Pin Configuration
Top View



Maximum Ratings

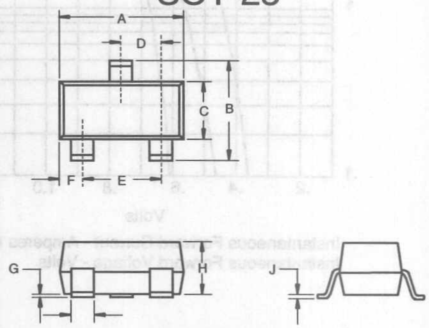
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 417°C/W Junction To Ambient

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Reverse Voltage	V_R	100V	
Peak Forward Current	I_F	200mA	
Power Dissipation	P_{TOT}	300mW	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	820mV	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	1.0µA 100µA	V_R=50Volts T_J = 25°C T_J = 125°C
Typical Junction Capacitance	C_J	1.5pF	Measured at 1.0MHz, V_R=0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 0V R_L=500Ω

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

SOT-23



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

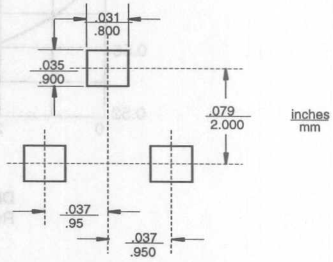
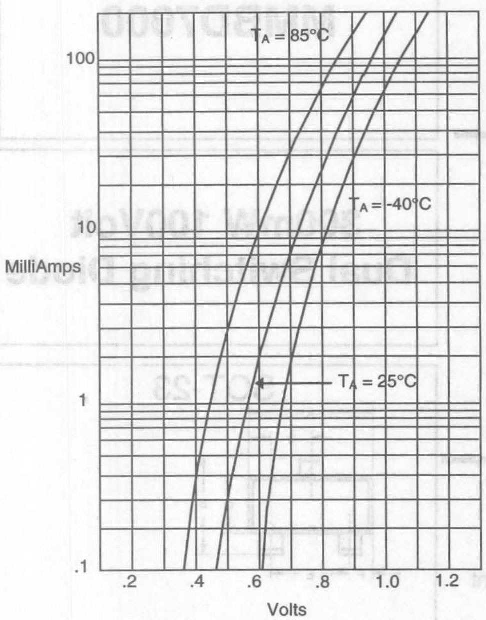
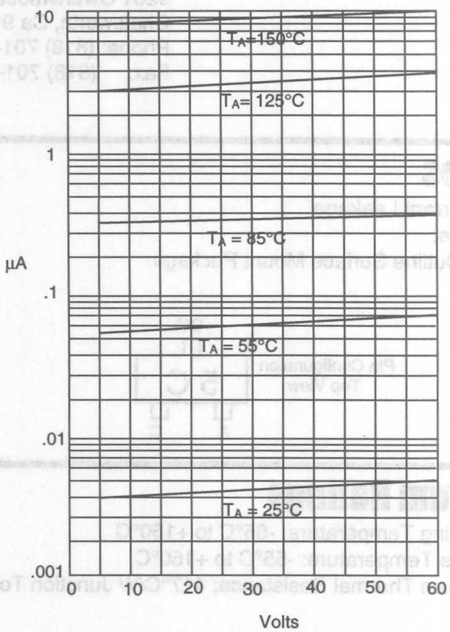


Figure 1
Typical Forward Characteristics



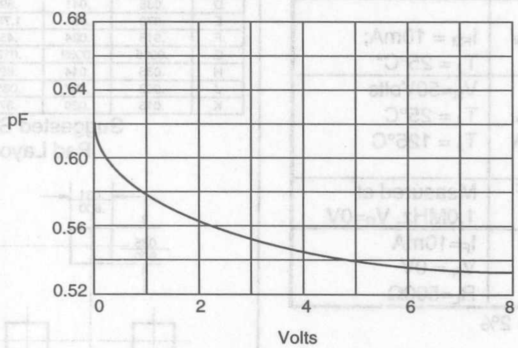
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



Instantaneous Reverse Current - MicroAmperes *versus*
Reverse Voltage - Volts

Figure 3
Diode Capacitance



Diode Capacitance - pF *versus*
Reverse Voltage - Volts

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Microsemi
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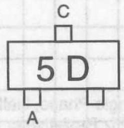
MMBD914

500mW 100 Volt Silicon Epitaxial Diode

Features

- Low Current Leakage
- Low Cost
- Small Outline Surface Mount Package

Pin Configuration
Top View



Maximum Ratings

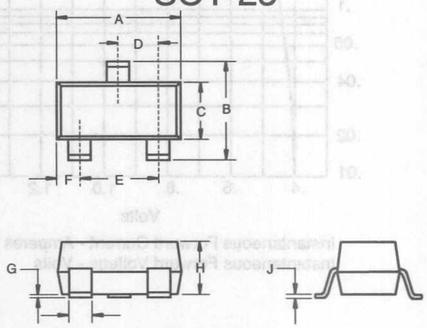
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 556°C/W Junction To Ambient

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Reverse Voltage	V_R	75V	
Peak Reverse Voltage	V_{RM}	100V	
Average Rectified Current	I_O	150mA	Resistive Load $f > 50Hz$
Power Dissipation	P_{TOT}	500mW	
Junction Temperature	T_J	200°C	
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	I_{FM} = 10mA; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	25nA 50µA	V_R=20Volts T_J = 25°C T_J = 150°C
Typical Junction Capacitance	C_J	4pF	Measured at 1.0MHz, V_R=4.0V
Reverse Recovery Time	T_{rr}	4nS	I_F=10mA V_R = 6V R_L=100Ω

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

SOT-23



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout

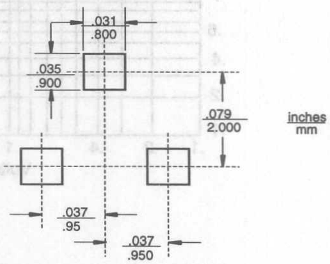
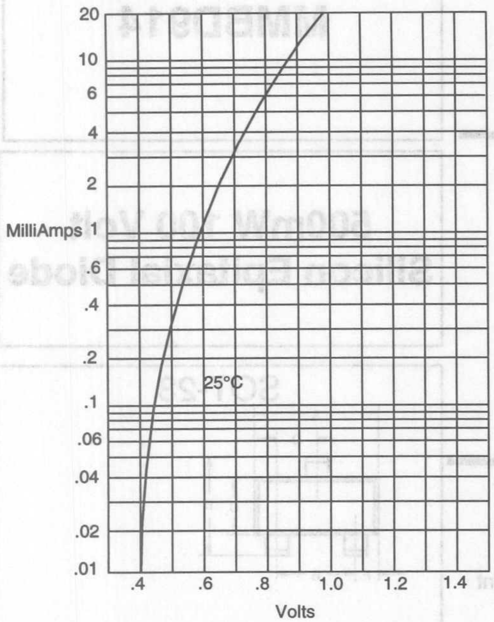
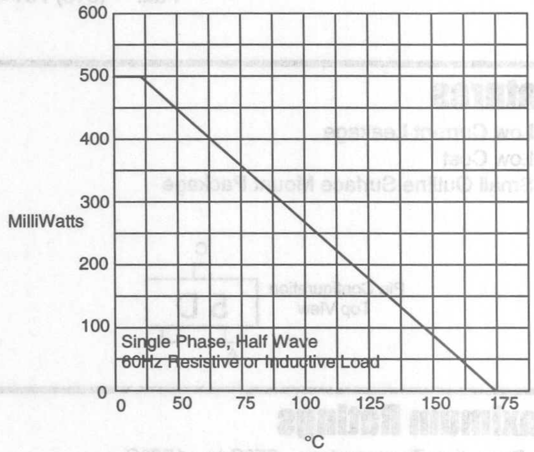


Figure 1
Typical Forward Characteristics



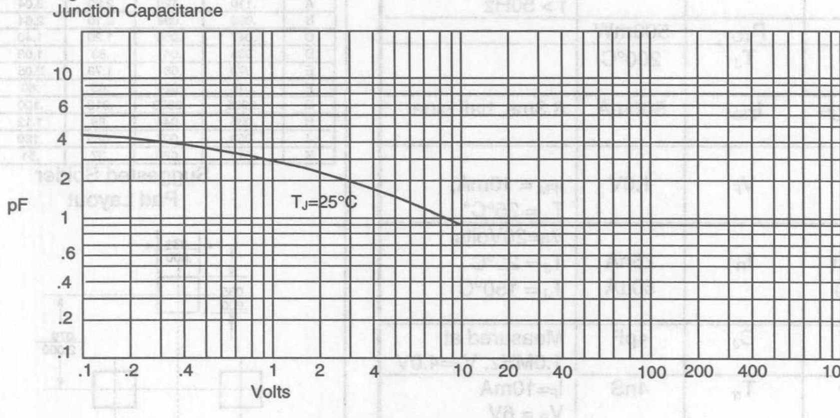
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Admissable Power Dissipation - MilliWatts *versus*
Ambient Temperature - °C

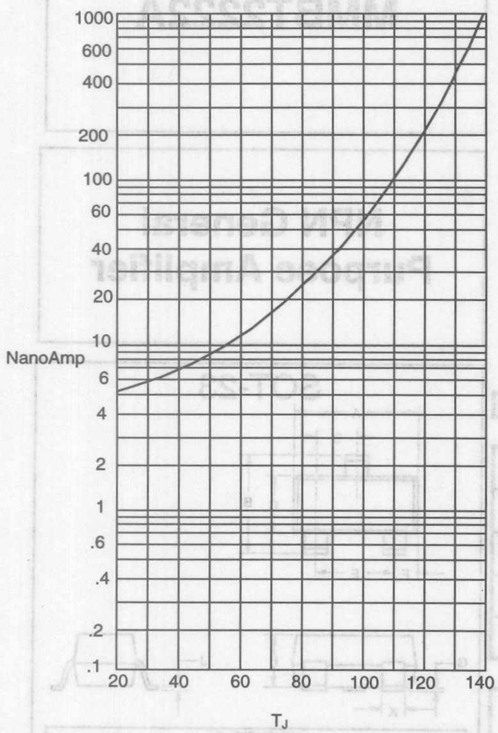
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

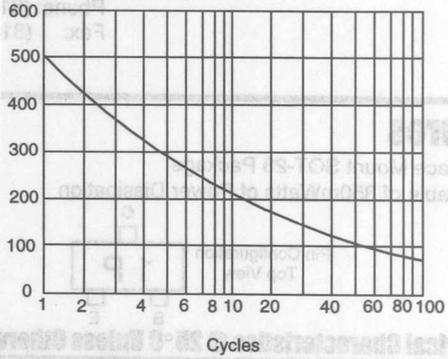
MMBD914

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - NanoAmperes *versus* Junction Temperature - °C

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

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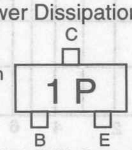
MMBT2222A

NPN General Purpose Amplifier

Features

- Surface Mount SOT-23 Package
- Capable of 350mWatts of Power Dissipation

Pin Configuration
Top View

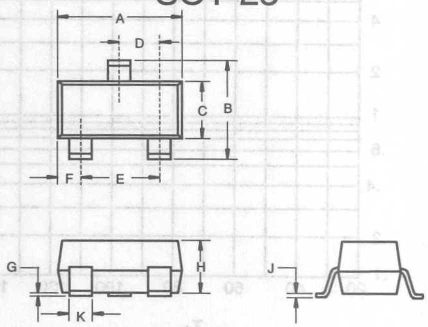


Electrical Characteristics @ 25 °C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=10mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10μAdc, I_E=0)	75		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10μAdc, I_C=0)	6.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=60Vdc, V_{BE}=3.0Vdc)		20	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=60Vdc, V_{BE}=3.0Vdc)		10	nAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=10Vdc)	35		
	(I_C=1.0mAdc, V_{CE}=10Vdc)	50		
	(I_C=10mAdc, V_{CE}=10Vdc)	75	300	
	(I_C=150mAdc, V_{CE}=10Vdc)	100		
	(I_C=150mAdc, V_{CE}=1.0Vdc)	50		
	(I_C=500mAdc, V_{CE}=10Vdc)	40		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			
	(I_C=150mAdc, I_B=15mAdc)		0.3	Vdc
	(I_C=500mAdc, I_B=50mAdc)		1.0	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			
	(I_C=150mAdc, I_B=15mAdc)	0.6	1.2	Vdc
	(I_C=500mAdc, I_B=50mAdc)		2.0	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=20mAdc, V_{CE}=20Vdc, f=100MHz)	300		MHz
C_{obo}	Output Capacitance (V_{CB}=10Vdec, I_E=0, f=100kHz)		8.0	pF
C_{ibo}	Input Capacitance (V_{BE}=0.5Vdc, I_C=0, f=100kHz)		25	pF
NF	Noise Figure (I_C=100μAdc, V_{CE}=10Vdc, R_S=1.0kΩ f=1.0kHz)		4.0	dB
SWITCHING CHARACTERISTICS				
t_d	Delay Time	(V_{CC}=30Vdc, V_{BE}=0.5Vdc	10	ns
t_r	Rise Time	I_C=150mAdc, I_{B1}=15mAdc)	25	ns
t_s	Storage Time	(V_{CC}=30Vdc, I_C=150mAdc	225	ns
t_f	Fall Time	I_{B1}=I_{B2}=15mAdc)	60	ns

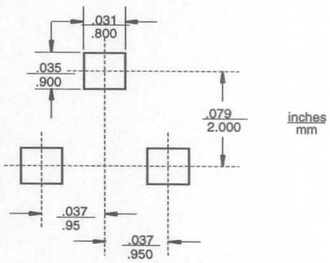
*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

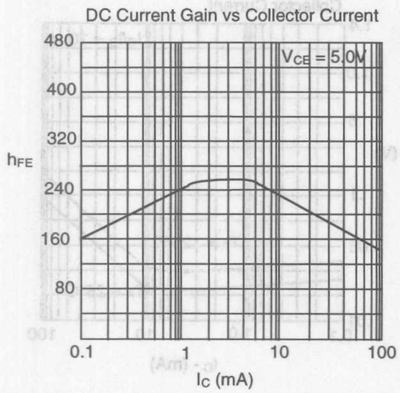
SOT-23

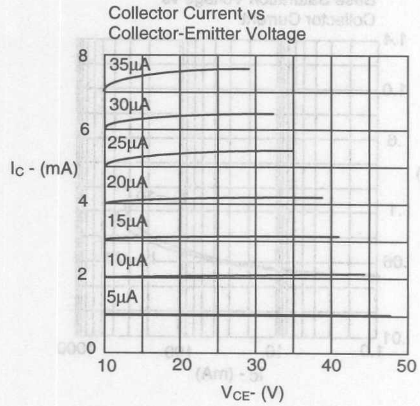


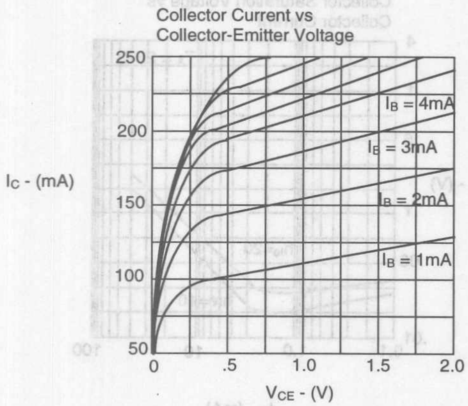
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

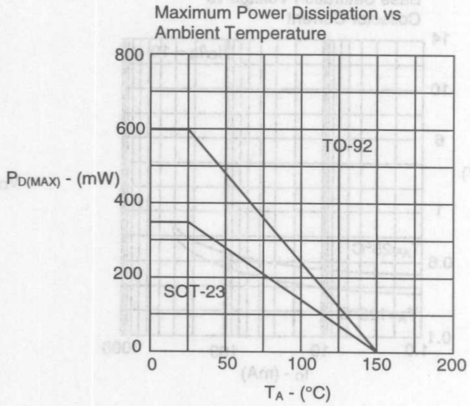
Suggested Solder Pad Layout

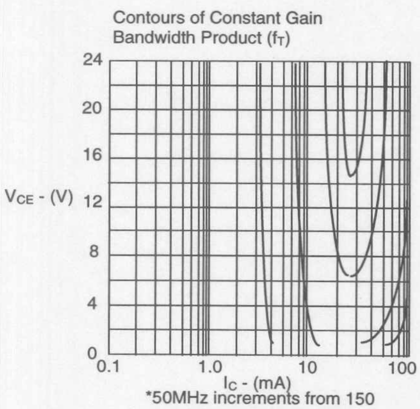




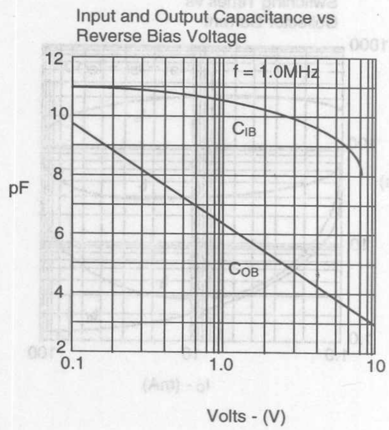




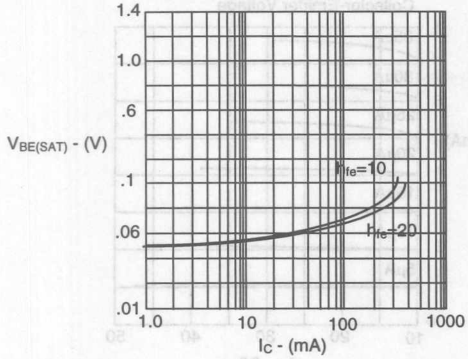




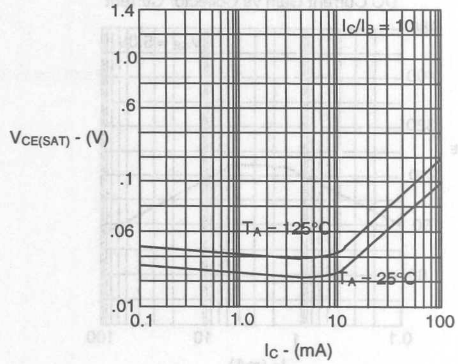
*50MHz increments from 150 to 250MHz and 260MHz



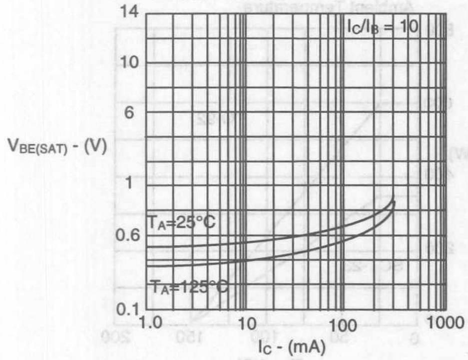
Base Saturation Voltage vs
Collector Current



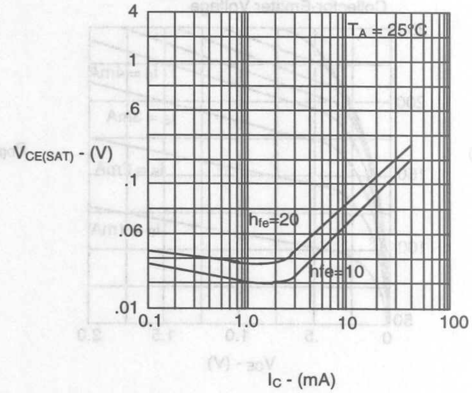
Collector Saturation Voltage vs
Collector Current



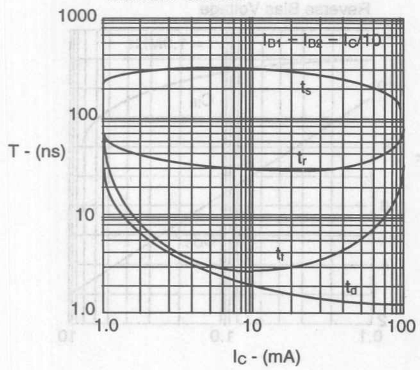
Base Saturation Voltage vs
Collector Current



Collector Saturation Voltage vs
Collector Current



Switching Times vs
Collector Current



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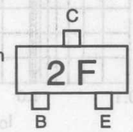
MMBT2907A

PNP General Purpose Amplifier

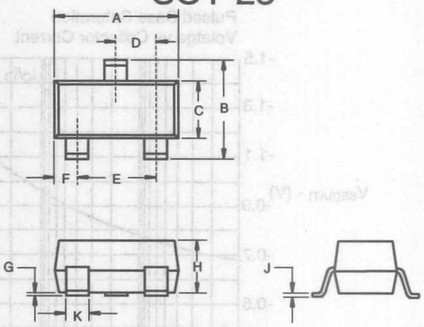
Features

- Surface Mount SOT-23 Package
- Capable of 350mWatts of Power Dissipation

Pin Configuration
Top View

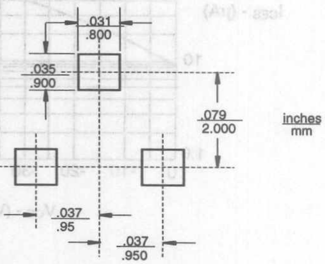


SOT-23



	DIMENSIONS				
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder
Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

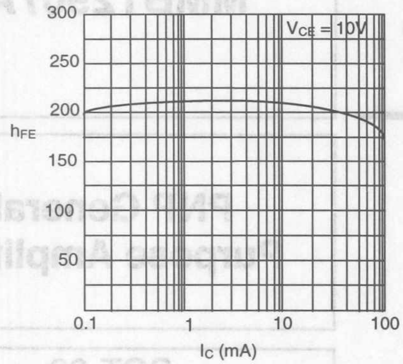
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=10mAdc, I_B=0)	60		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10μAdc, I_E=0)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10μAdc, I_C=0)	5.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=0.5Vdc)		50	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=0.5Vdc)		50	nAdc
I_{CBO}	Collector Cutoff Current (V_{CB}=50Vdc, I_E=0) (V_{CB}=50Vdc, I_E=0, T_A=150°C)		 0.1 10.0	μAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain* (I_C=0.1mAdc, V_{CE}=10Vdc) (I_C=1.0mAdc, V_{CE}=10Vdc) (I_C=10mAdc, V_{CE}=10Vdc) (I_C=150mAdc, V_{CE}=10Vdc) (I_C=500mAdc, V_{CE}=10Vdc)	 75 100 100 100 50	 300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=150mAdc, I_B=15mAdc) (I_C=500mAdc, I_B=50mAdc)		 0.4 1.6	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=150mAdc, I_B=15mAdc) (I_C=500mAdc, I_B=50mAdc)		 1.3 2.6	Vdc
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=50mAdc, V_{CE}=20Vdc, f=100MHz)	200		MHz
C_{cbo}	Output Capacitance (V_{CB}=10Vdc, I_E=0, f=100kHz)		8.0	pF
C_{ibo}	Input Capacitance (V_{EB}=2.0Vdc, I_C=0, f=100kHz)		30.0	pF

SWITCHING CHARACTERISTICS

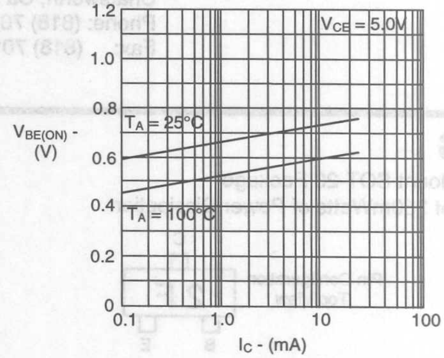
Symbol	Parameter	Conditions	Max	Units
t_d	Delay Time	(V_{CC}=3.0Vdc, I_C=150mAdc,	10	ns
t_r	Rise Time	I_{B1}=15mAdc)	40	ns
t_s	Storage Time	(V_{CC}=3.0Vdc, I_C=150mAdc	80	ns
t_f	Fall Time	I_{B1}=I_{B2}=15mAdc)	30	ns

*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

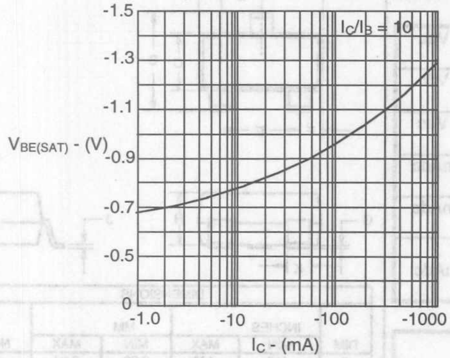
DC Current Gain vs Collector Current



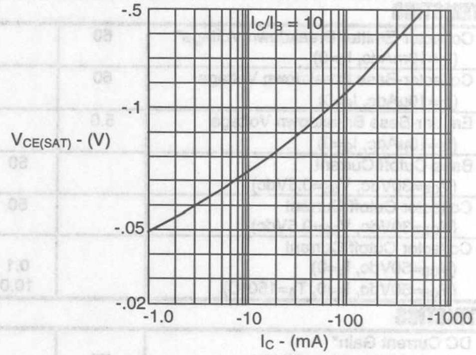
Base-Emitter ON Voltage vs Collector Current



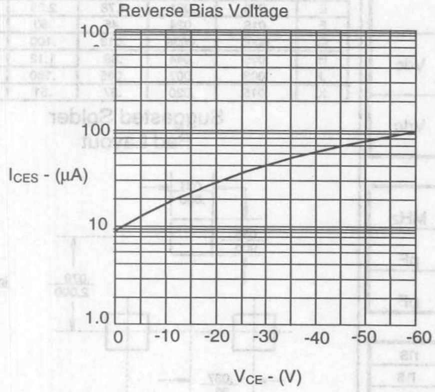
Pulsed Base Saturation Volatge vs Collector Current



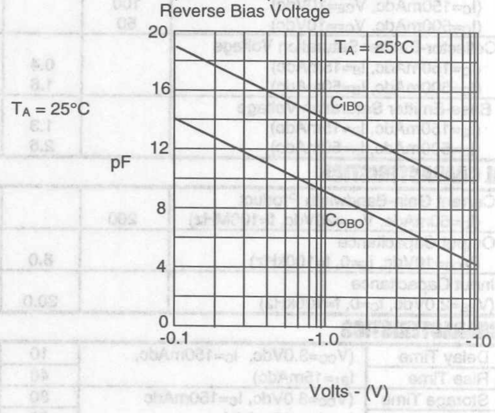
Pulsed Collector Saturation Voltage vs Collector Current



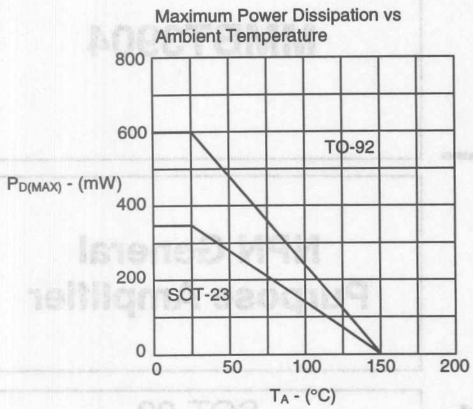
Collector Reverse Current vs Reverse Bias Voltage



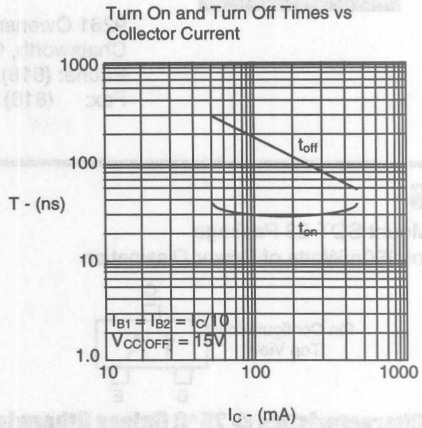
Input and Output Capacitances vs Reverse Bias Voltage



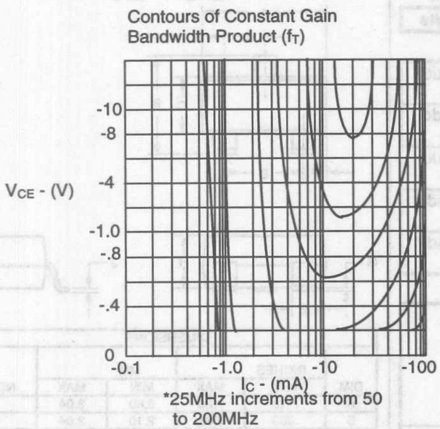
MMBT2907A



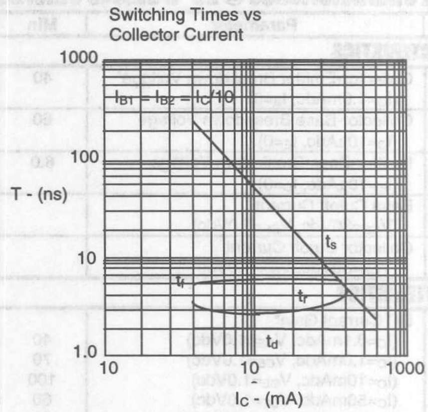
Maximum Power Dissipation vs Ambient Temperature
800
600
400
200
0
P D(MAX) - (mW)
TO-92
SOT-23
0
50
100
150
200
T A - (°C)



Turn On and Turn Off Times vs Collector Current
1000
100
10
1.0
T - (ns)
t off
t on
I B1 = I B2 = I C/10
V CC(OFF) = 15V
10
100
1000
I C - (mA)



Contours of Constant Gain Bandwidth Product (f T)
-10
-8
-4
-1.0
-.8
-.4
0
V CE - (V)
-0.1
-1.0
-10
-100
I C - (mA)
*25MHz increments from 50 to 200MHz



Switching Times vs Collector Current
1000
100
10
1.0
T - (ns)
I B1 = I B2 = I C/10
t s
t f
t r
t d
10
10
1000
I C - (mA)

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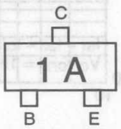
MMBT3904

NPN General Purpose Amplifier

Features

- Surface Mount SOT-23 Package
- Capable of 350mWatts of Power Dissipation

Pin Configuration
Top View



Electrical Characteristics @ 25°C Unless Otherwise Specified

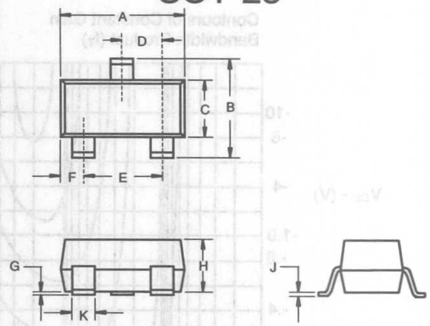
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10µAdc, I_E=0)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10µAdc, I_C=0)	6.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=1.0Vdc)	40		
	(I_C=1.0mAdc, V_{CE}=1.0Vdc)	70		
	(I_C=10mAdc, V_{CE}=1.0Vdc)	100	300	
	(I_C=50mAdc, V_{CE}=1.0Vdc)	60		
	(I_C=100mAdc, V_{CE}=1.0Vdc)	30		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			
	(I_C=10mAdc, I_B=1.0mAdc)		0.2	Vdc
	(I_C=50mAdc, I_B=5.0mAdc)		0.3	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			
	(I_C=10mAdc, I_B=1.0mAdc)	0.65	0.85	Vdc
	(I_C=50mAdc, I_B=5.0mAdc)		0.95	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=10mAdc, V_{CE}=20Vdc, f=100MHz)	300		MHz
C_{obo}	Output Capacitance (V_{CB}=5.0Vdec, I_E=0, f=1.0MHz)		4.0	pF
C_{ibo}	Input Capacitance (V_{BE}=0.5Vdc, I_C=0, f=1.0MHz)		8.0	pF
NF	Noise Figure (I_C=100µAdc, V_{CE}=5.0Vdc, R_S=1.0kΩ f=10Hz to 15.7kHz)		5.0	dB

SWITCHING CHARACTERISTICS

Symbol	Parameter	Conditions	Max	Units
t_d	Delay Time	(V_{CC}=3.0Vdc, V_{BE}=0.5Vdc	35	ns
t_r	Rise Time	I_C=10mAdc, I_{B1}=1.0mAdc)	35	ns
t_s	Storage Time	(V_{CC}=3.0Vdc, I_C=10mAdc	200	ns
t_f	Fall Time	I_{B1}=I_{B2}=1.0mAdc)	50	ns

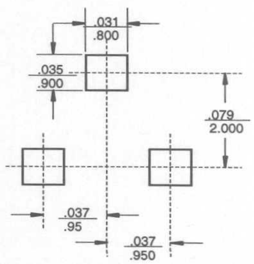
*Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

SOT-23

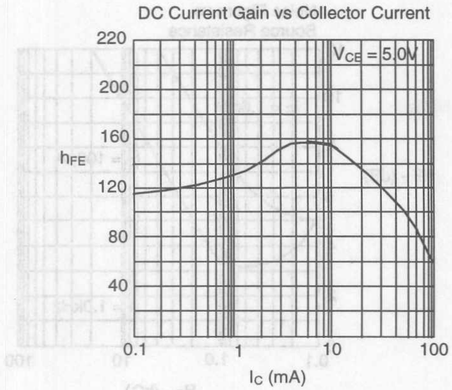


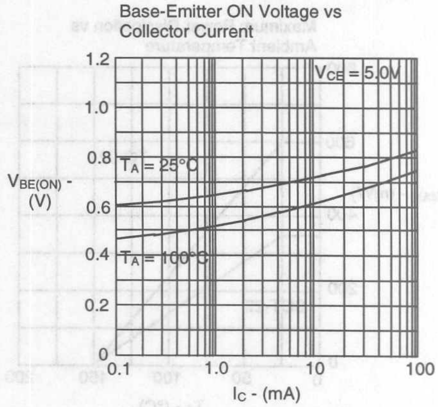
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

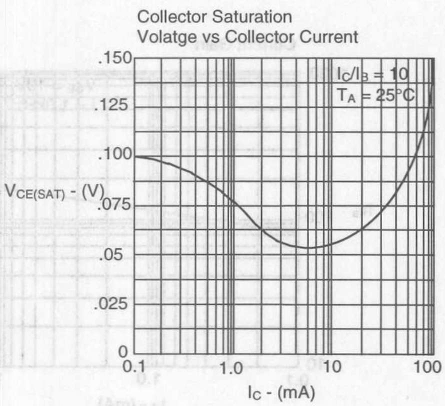
Suggested Solder Pad Layout

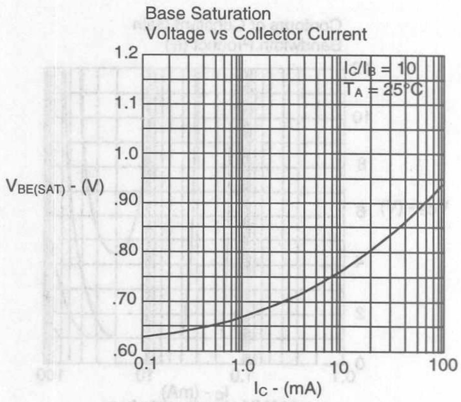


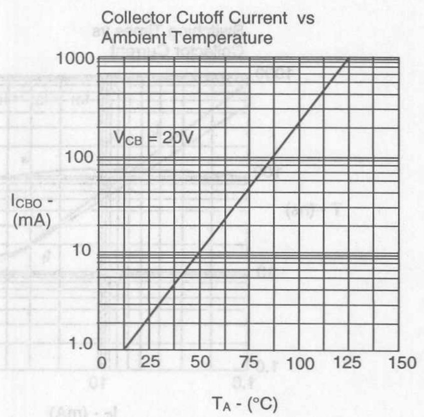
inches
mm

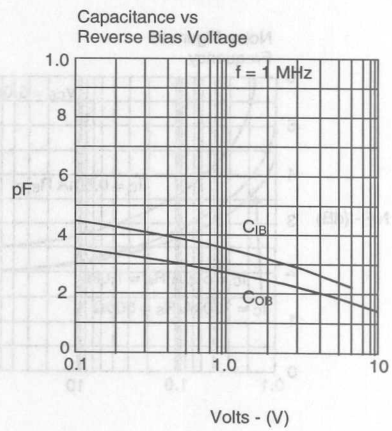

DC Current Gain vs Collector Current
$V_{CE} = 5.0V$
h_{FE}
220
200
160
120
80
40
0.1
1
10
100
I_C (mA)

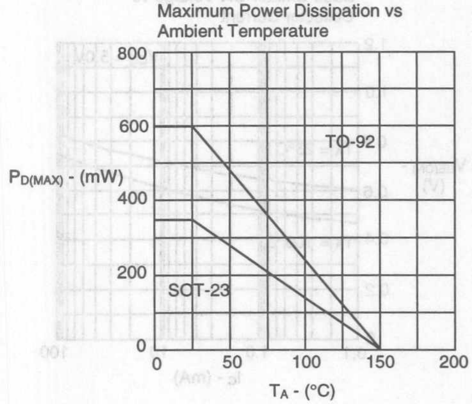

Base-Emitter ON Voltage vs Collector Current
$V_{CE} = 5.0V$
$T_A = 25°C$
$T_A = 100°C$
$V_{BE(ON)}$ - (V)
1.2
1.0
0.8
0.6
0.4
0.2
0
0.1
1.0
10
100
I_C - (mA)

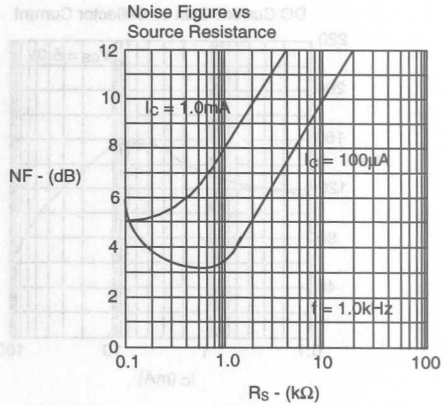

Collector Saturation Volatge vs Collector Current
$I_C/I_B = 10$
$T_A = 25°C$
$V_{CE(SAT)}$ - (V)
.150
.125
.100
.075
.05
.025
0
0.1
1.0
10
100
I_C - (mA)

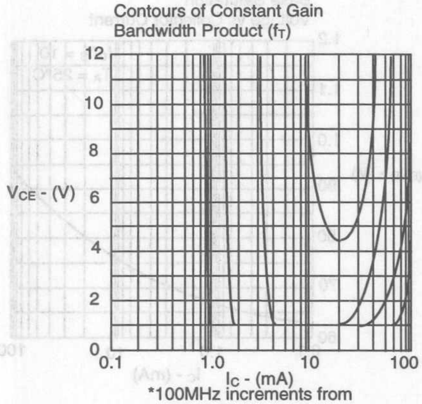

Base Saturation Voltage vs Collector Current
$I_C/I_B = 10$
$T_A = 25°C$
$V_{BE(SAT)}$ - (V)
1.2
1.1
1.0
.90
.80
.70
.60
0.1
1.0
10
100
I_C - (mA)


Collector Cutoff Current vs Ambient Temperature
$V_{CB} = 20V$
I_{CBO} - (mA)
1000
100
10
1.0
0
25
50
75
100
125
150
T_A - (°C)

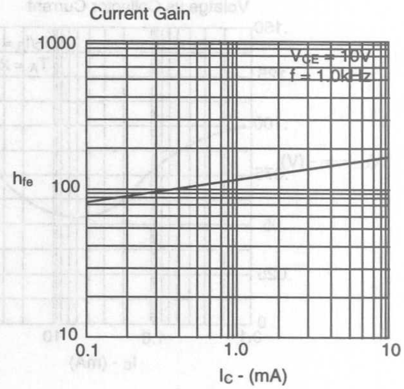

Capacitance vs Reverse Bias Voltage
f = 1 MHz
pF
C_{IB}
C_{OB}
1.0
8
6
4
2
0
0.1
1.0
10
Volts - (V)

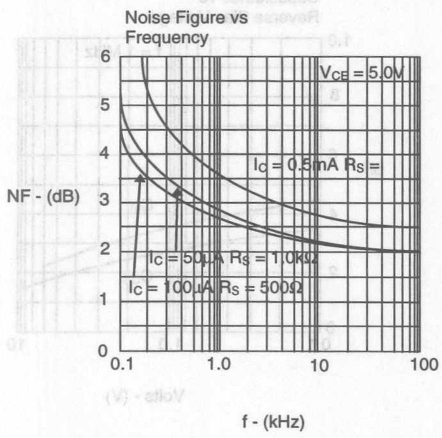


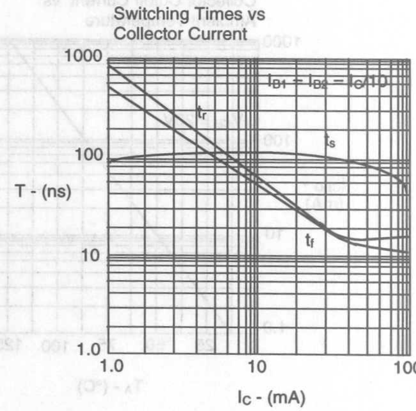




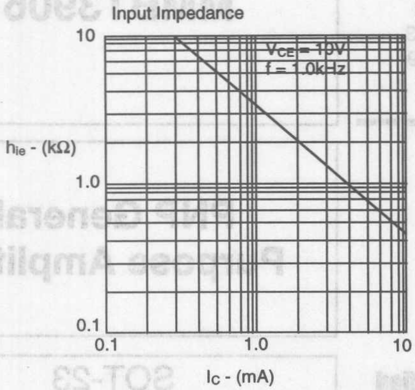
*100MHz increments from 200 to 500MHz

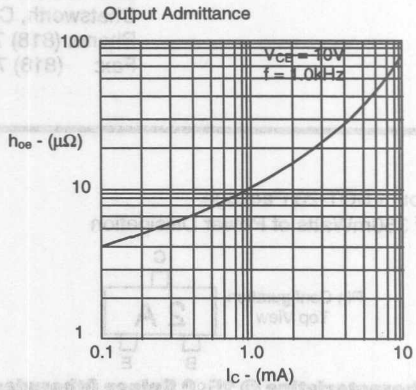


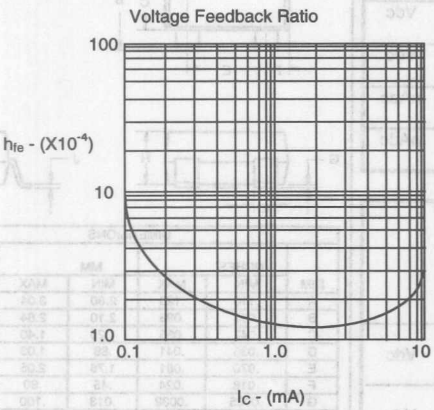


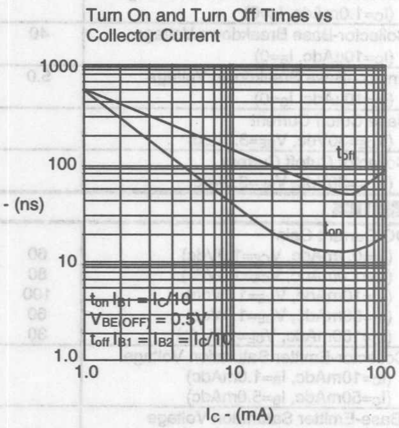


MMBT3904


Input Impedance
V_{CE} = 10V
f = 1.0kHz
h_{ie} - (kΩ)
10
1.0
0.1
0.1
1.0
10
I_C - (mA)


Output Admittance
V_{CE} = 10V
f = 1.0kHz
h_{oe} - (μΩ)
100
10
1
0.1
1.0
10
I_C - (mA)


Voltage Feedback Ratio
h_{fe} - (X10^{-4})
100
10
1.0
0.1
1.0
10
I_C - (mA)


Turn On and Turn Off Times vs
Collector Current
T - (ns)
1000
100
10
1.0
t_{off}
t_{on}
t_{on} I_{B1} = I_C/10
$V_{BE(OFF)}$ = 0.5V
t_{off} I_{B1} = I_{B2} = I_C/10
1.0
10
100
I_C - (mA)

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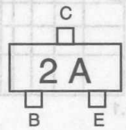
MMBT3906

PNP General Purpose Amplifier

Features

- Surface Mount SOT-23 Package
- Capable of 350mWatts of Power Dissipation

Pin Configuration
Top View



Electrical Characteristics @ 25°C Unless Otherwise Specified

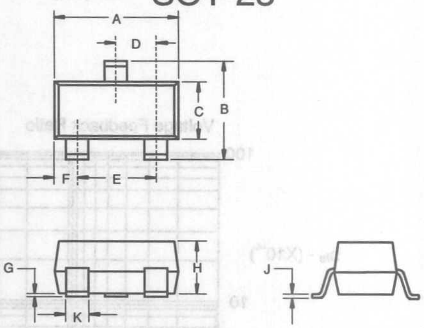
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10µAdc, I_E=0)	40		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10µAdc, I_C=0)	5.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		50	nAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=1.0Vdc)	60		
	(I_C=1.0mAdc, V_{CE}=1.0Vdc)	80		
	(I_C=10mAdc, V_{CE}=1.0Vdc)	100	300	
	(I_C=50mAdc, V_{CE}=1.0Vdc)	60		
	(I_C=100mAdc, V_{CE}=1.0Vdc)	30		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=10mAdc, I_B=1.0mAdc) (I_C=50mAdc, I_B=5.0mAdc)		0.25 0.4	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=10mAdc, I_B=1.0mAdc) (I_C=50mAdc, I_B=5.0mAdc)	0.65	0.85 0.95	Vdc
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=10mAdc, V_{CE}=20Vdc, f=100MHz)	250		MHz
C_{obo}	Output Capacitance (V_{CB}=5.0Vdec, I_E=0, f=100MHz)		4.5	pF
C_{ibo}	Input Capacitance (V_{BE}=0.5Vdc, I_C=0, f=100kHz)		10.0	pF
NF	Noise Figure (I_C=100µAdc, V_{CE}=5.0Vdc, R_S=1.0kΩ f=10Hz to 15.7kHz)		4.0	dB

SWITCHING CHARACTERISTICS

Symbol	Parameter	Conditions	Max	Units
t_d	Delay Time	(V_{CC}=3.0Vdc, V_{BE}=0.5Vdc	35	ns
t_r	Rise Time	I_C=10mAdc, I_{B1}=1.0mAdc)	35	ns
t_s	Storage Time	(V_{CC}=3.0Vdc, I_C=10mAdc	225	ns
t_f	Fall Time	I_{B1}=I_{B2}=1.0mAdc)	75	ns

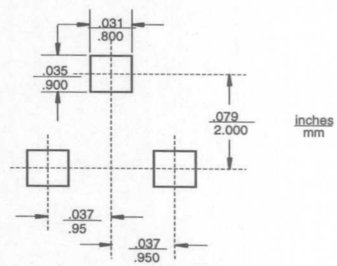
*Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

SOT-23

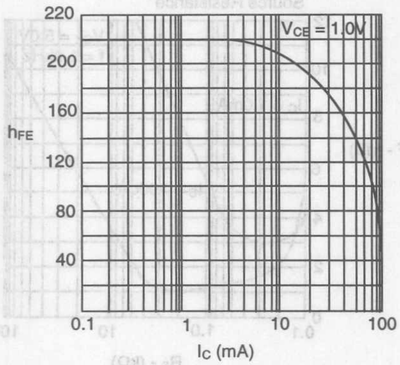


DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

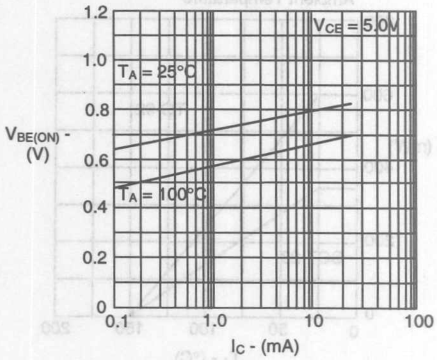
Suggested Solder Pad Layout



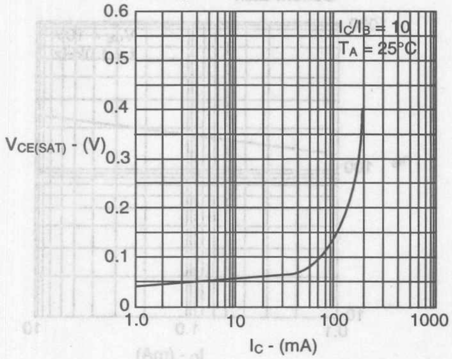
DC Current Gain vs Collector Current



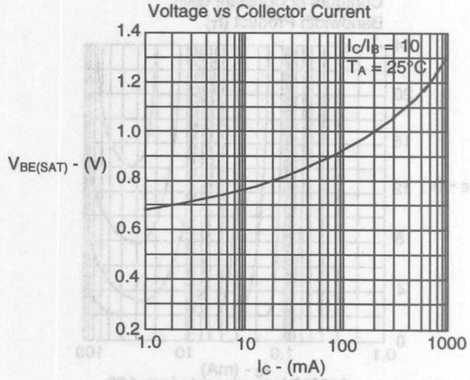
Base-Emitter ON Voltage vs Collector Current



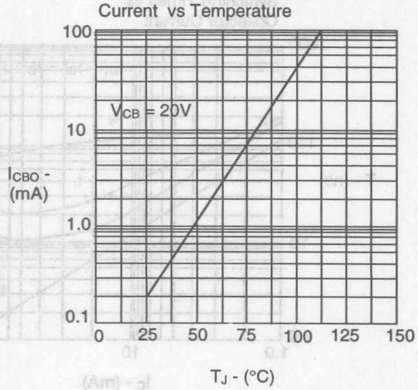
Collector-Emitter Saturation Volatge vs Collector Current



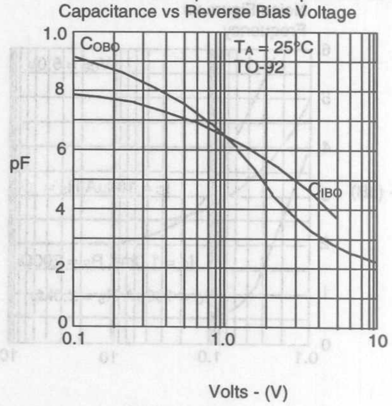
Base-Emitter Saturation Voltage vs Collector Current



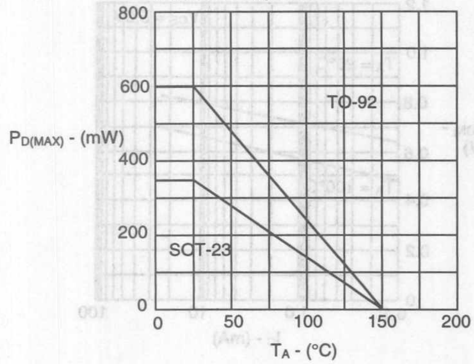
Collector-Base Diode Reverse Current vs Temperature



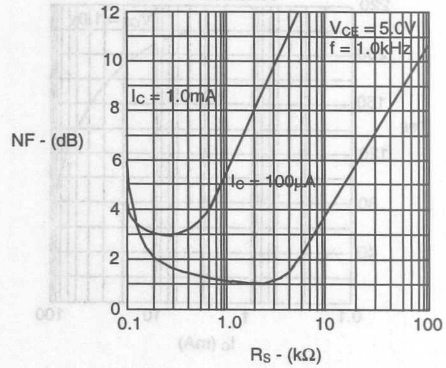
Common Base Open Circuit Input and Output Capacitance vs Reverse Bias Voltage



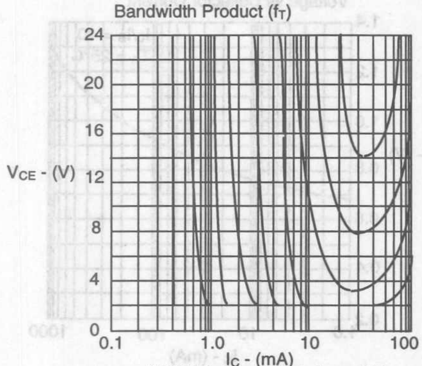
Maximum Power Dissipation vs Ambient Temperature



Noise Figure vs Source Resistance

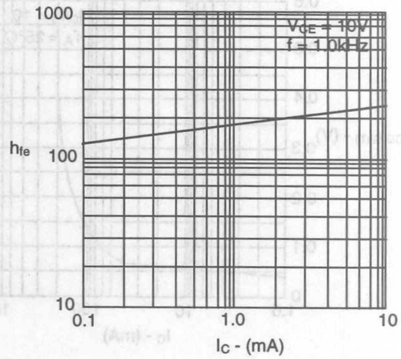


Contours of Constant Gain Bandwidth Product (f_T)

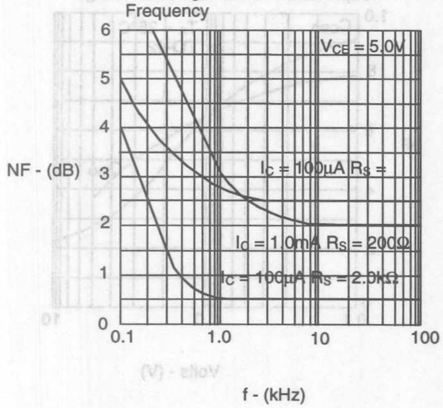


*100MHz increments from 100 to 700, 750 and 800MHz

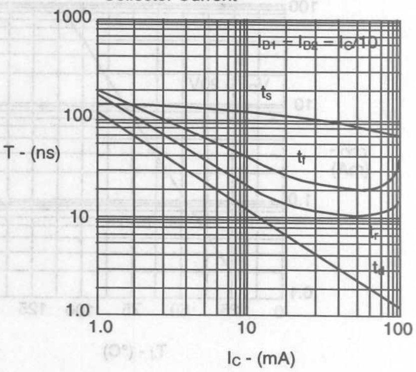
Current Gain

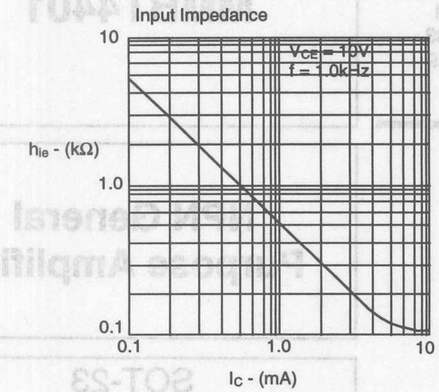


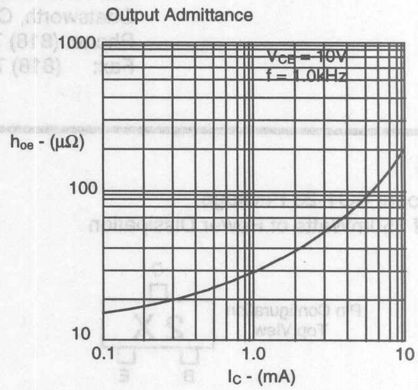
Noise Figure vs Frequency

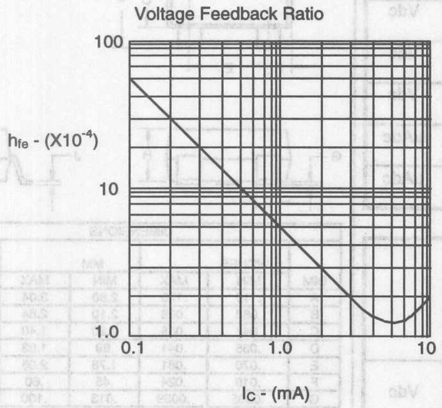


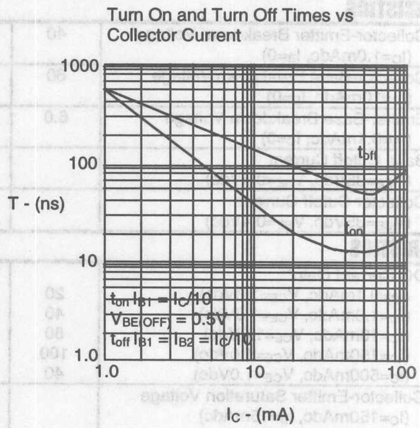
Switching Times vs Collector Current




Input Impedance
V_{CE} = 10V
f = 1.0kHz
h_{ie} - (kΩ)
10
1.0
0.1
0.1
1.0
10
I_C - (mA)


Output Admittance
V_{CE} = 10V
f = 1.0kHz
h_{oe} - (μΩ)
1000
100
10
0.1
1.0
10
I_C - (mA)


Voltage Feedback Ratio
h_{re} - (X10^{-4})
100
10
1.0
0.1
1.0
10
I_C - (mA)


Turn On and Turn Off Times vs
Collector Current
T - (ns)
1000
100
10
1.0
t_{off}
t_{on}
t_{on} I_{B1} = I_C/10
$V_{BE(OFF)}$ = 0.5V
t_{off} I_{B1} = I_{B2} = I_C/10
1.0
10
100
I_C - (mA)

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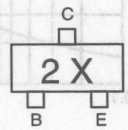
MMBT4401

NPN General Purpose Amplifier

Features

- Surface Mount SOT-23 Package
- Capable of 350mWatts of Power Dissipation

Pin Configuration
Top View



Electrical Characteristics @ 25°C Unless Otherwise Specified

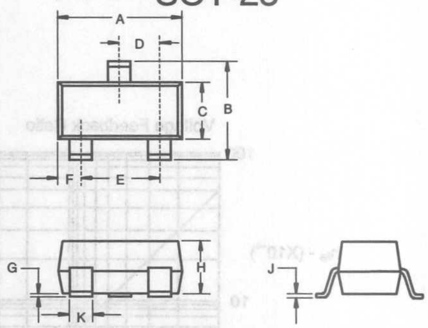
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10mAdc, I_E=0)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=0.1mAdc, I_C=0)	6.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=35Vdc, V_{BE}=0.4Vdc)		0.1	µAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=35Vdc, V_{BE}=0.4Vdc)		0.1	µAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=1.0Vdc)	20		
	(I_C=1.0mAdc, V_{CE}=1.0Vdc)	40		
	(I_C=10mAdc, V_{CE}=1.0Vdc)	80		
	(I_C=150mAdc, V_{CE}=1.0Vdc)	100	300	
	(I_C=500mAdc, V_{CE}=1.0Vdc)	40		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			
	(I_C=150mAdc, I_B=15mAdc)		0.4	Vdc
	(I_C=500mAdc, I_B=50mAdc)		0.75	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			
	(I_C=150mAdc, I_B=15mAdc)	0.75	0.95	Vdc
	(I_C=500mAdc, I_B=50mAdc)		1.2	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=20mAdc, V_{CE}=10Vdc, f=100MHz)	250		MHz
C_{cb}	Collector-Base Capacitance (V_{CB}=5.0Vdc, I_E=0, f=100kHz)		6.5	pF
C_{eb}	Emitter-Base Capacitance (V_{BE}=0.5Vdc, I_C=0, f=100kHz)		30.0	pF

SWITCHING CHARACTERISTICS

Symbol	Parameter	Conditions	Max	Units
t_d	Delay Time	(V_{CC}=30Vdc, V_{BE}=0.2Vdc	15	ns
t_r	Rise Time	I_C=150mAdc, I_{B1}=15mAdc)	20	ns
t_s	Storage Time	(V_{CC}=30Vdc, I_C=150mAdc	225	ns
t_f	Fall Time	I_{B1}=I_{B2}=15mAdc)	30	ns

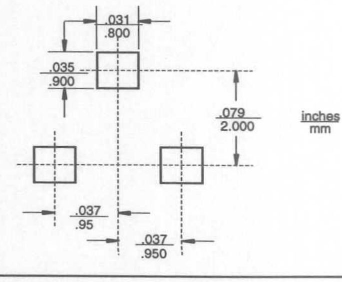
*Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

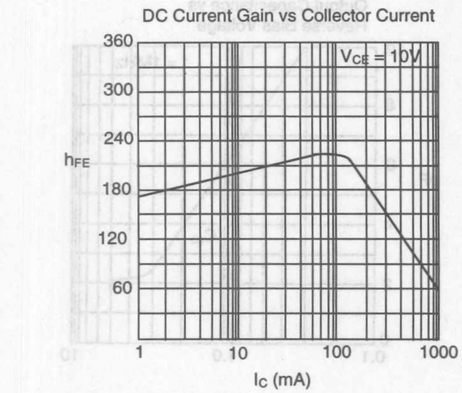
SOT-23

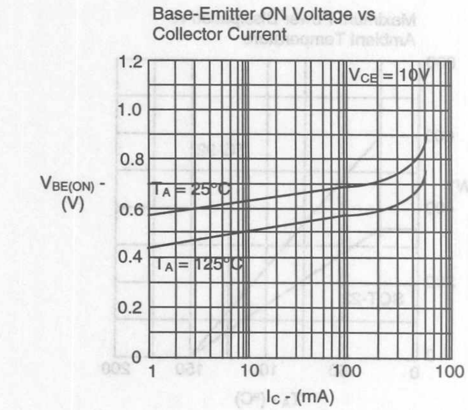


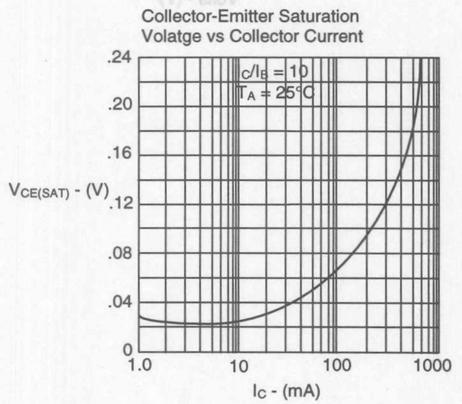
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

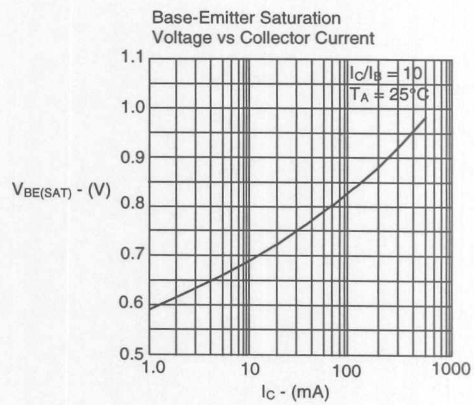
Suggested Solder
Pad Layout

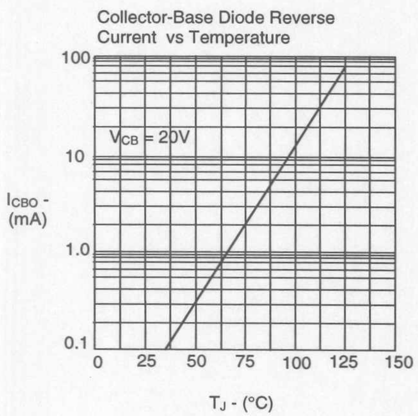


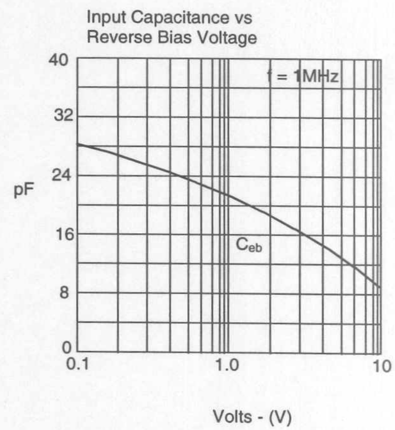

DC Current Gain vs Collector Current
$V_{CE} = 10V$
h_{FE}
360
300
240
180
120
60
1
10
100
1000
I_C (mA)


Base-Emitter ON Voltage vs Collector Current
$V_{CE} = 10V$
$T_A = 25°C$
$T_A = 125°C$
$V_{BE(ON)}$ - (V)
1.2
1.0
0.8
0.6
0.4
0.2
0
1
10
100
100
I_C - (mA)

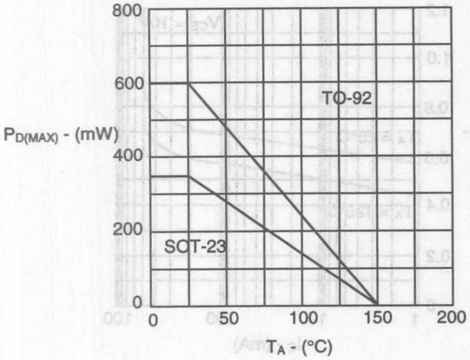

Collector-Emitter Saturation Volatge vs Collector Current
$I_C/I_B = 10$
$T_A = 25°C$
$V_{CE(SAT)}$ - (V)
.24
.20
.16
.12
.08
.04
0
1.0
10
100
1000
I_C - (mA)


Base-Emitter Saturation Voltage vs Collector Current
$I_C/I_B = 10$
$T_A = 25°C$
$V_{BE(SAT)}$ - (V)
1.1
1.0
0.9
0.8
0.7
0.6
0.5
1.0
10
100
1000
I_C - (mA)

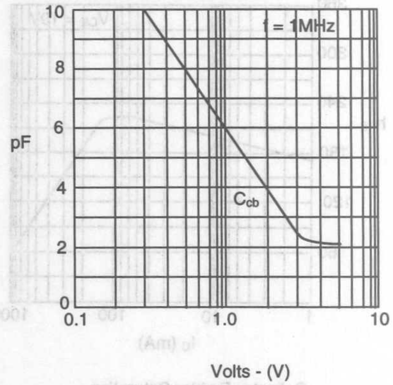

Collector-Base Diode Reverse Current vs Temperature
$V_{CB} = 20V$
I_{CBO} - (mA)
100
10
1.0
0.1
0
25
50
75
100
125
150
T_J - (°C)


Input Capacitance vs Reverse Bias Voltage
f = 1MHz
C_{eb}
pF
40
32
24
16
8
0
0.1
1.0
10
Volts - (V)

Maximum Power Dissipation vs Ambient Temperature



Output Capacitance vs Reverse Bias Voltage



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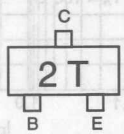
MMBT4403

PNP General Purpose Amplifier

Features

- Surface Mount SOT-23 Package
- Capable of 350mWatts of Power Dissipation

Pin Configuration
Top View



Electrical Characteristics @ 25°C Unless Otherwise Specified

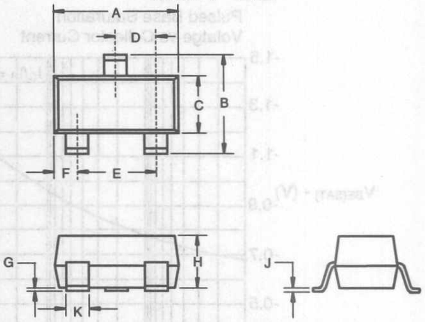
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=1.0mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10µAdc, I_E=0)	40		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10µAdc, I_C=0)	5.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		0.1	µAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=3.0Vdc)		0.1	µAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=1.0Vdc)	30		
	(I_C=1.0mAdc, V_{CE}=1.0Vdc)	60		
	(I_C=10mAdc, V_{CE}=1.0Vdc)	100	300	
	(I_C=150mAdc, V_{CE}=2.0Vdc)	100		
	(I_C=500mAdc, V_{CE}=2.0Vdc)	20		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=150mAdc, I_B=15mAdc)		0.4	Vdc
	(I_C=500mAdc, I_B=50mAdc)		0.75	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=150mAdc, I_B=15mAdc)	0.75	0.95	Vdc
	(I_C=500mAdc, I_B=50mAdc)		1.30	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=20mAdc, V_{CE}=10Vdc, f=100MHz)	200		MHz
C_{cb}	Output Capacitance (V_{CB}=10Vdc, I_E=0, f=140kHz)		8.5	pF
C_{eb}	Input Capacitance (V_{EB}=0.5Vdc, I_C=0, f=140kHz)		30.0	pF

SWITCHING CHARACTERISTICS

t_d	Delay Time	(V_{CC}=3.0Vdc, V_{BE}=2.0Vdc	15	ns
t_r	Rise Time	I_C=150mAdc, I_{B1}=15mAdc)	20	ns
t_s	Storage Time	(V_{CC}=3.0Vdc, I_C=150mAdc	225	ns
t_f	Fall Time	I_{B1}=I_{B2}=15mAdc)	30	ns

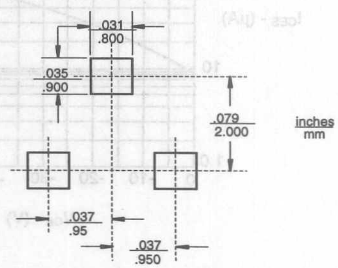
*Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

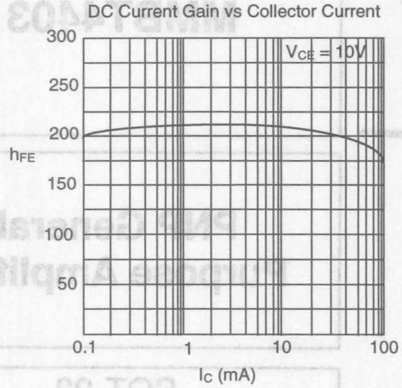
SOT-23

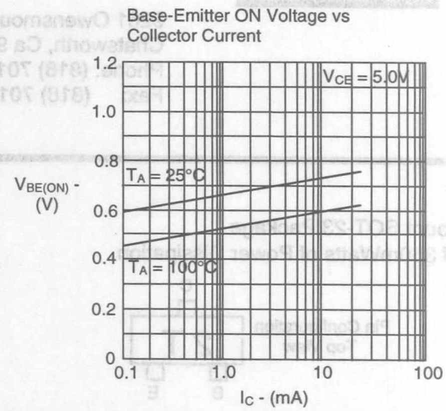


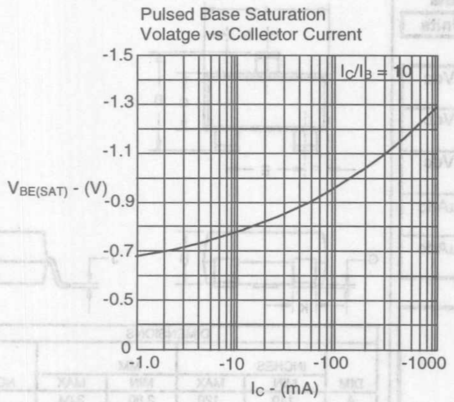
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

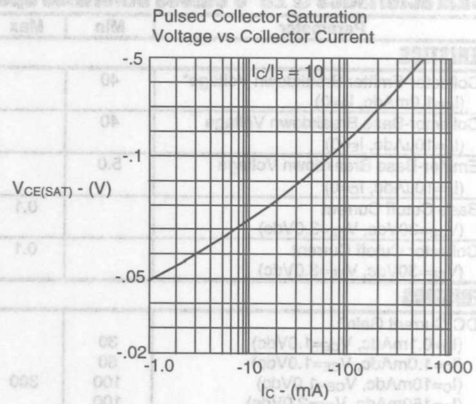
Suggested Solder Pad Layout

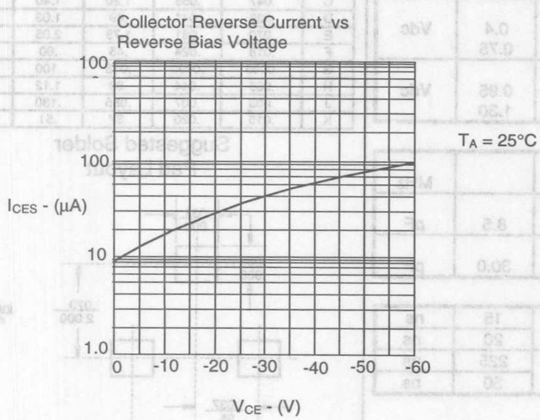


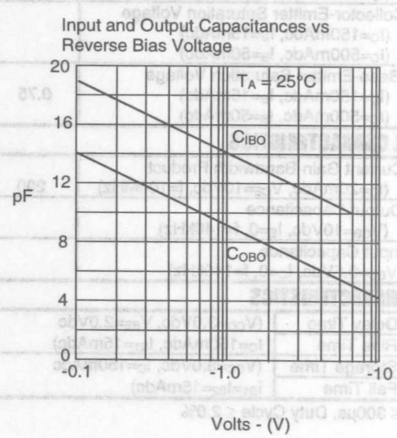

DC Current Gain vs Collector Current
VCE = 10V
300
250
200
150
100
50
hFE
0.1
1
10
100
IC (mA)


Base-Emitter ON Voltage vs
Collector Current
VCE = 5.0V
TA = 25°C
TA = 100°C
VBE(ON) -
(V)
1.2
1.0
0.8
0.6
0.4
0.2
0
0.1
1.0
10
100
IC - (mA)


Pulsed Base Saturation
Volatge vs Collector Current
IC/IB = 10
VBE(SAT) - (V)
-1.5
-1.3
-1.1
-0.9
-0.7
-0.5
0
-1.0
-10
-100
-1000
IC - (mA)

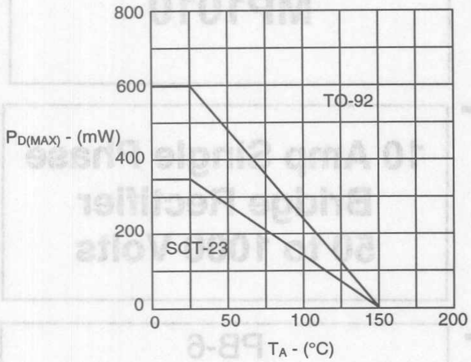

Pulsed Collector Saturation
Voltage vs Collector Current
IC/IB = 10
VCE(SAT) - (V)
-.5
-.1
-.05
-.02
-1.0
-10
-100
-1000
IC - (mA)


Collector Reverse Current vs
Reverse Bias Voltage
TA = 25°C
ICES - (µA)
100
100
10
1.0
0
-10
-20
-30
-40
-50
-60
VCE - (V)

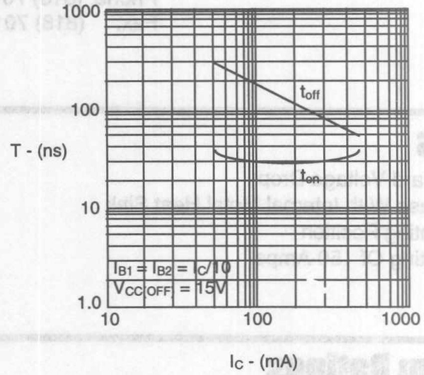

Input and Output Capacitances vs
Reverse Bias Voltage
TA = 25°C
CIBO
COBO
pF
20
16
12
8
4
0
-0.1
-1.0
-10
Volts - (V)

MMBT4403

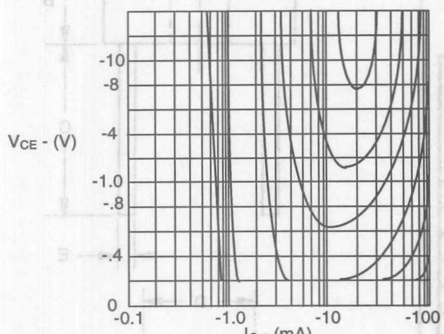
Maximum Power Dissipation vs Ambient Temperature



Turn On and Turn Off Times vs Collector Current

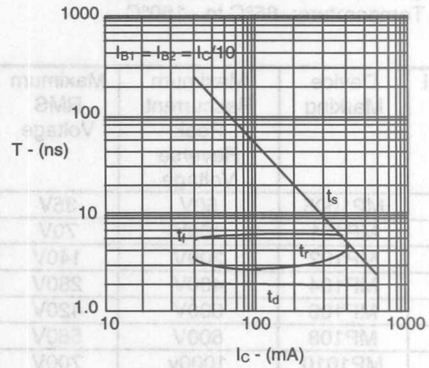


Contours of Constant Gain Bandwidth Product (f_T)



*25MHz increments from 50 to 200MHz

Switching Times vs Collector Current



Microsemi
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Chatsworth, Ca 91311
Phone: (818) 701-4933
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MP1005 THRU MP1010

10 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Low Forward Voltage Drop
- Plastic Case With Internal Metal Heat Sink
- Any Mounting Position
- Surge Rating Of 150 Amps

Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +150°C

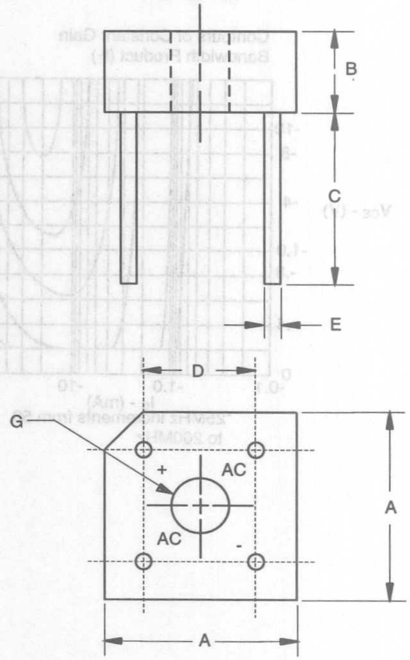
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP1005	MP1005	50V	35V	50V
MP101	MP101	100V	70V	100V
MP102	MP102	200V	140V	200V
MP104	MP104	400V	280V	400V
MP106	MP106	600V	420V	600V
MP108	MP108	800V	560V	800V
MP1010	MP1010	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	10.0A	$T_J = 75°C$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	I_{FM} = 5.0A per element; $T_A = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 2.0mA	$T_A = 25°C$ $T_A = 100°C$

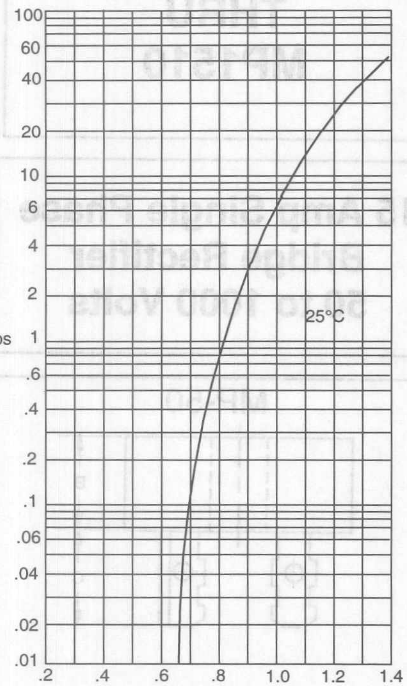
*Pulse test: Pulse width 300 μsec, Duty cycle 1%

PB-6



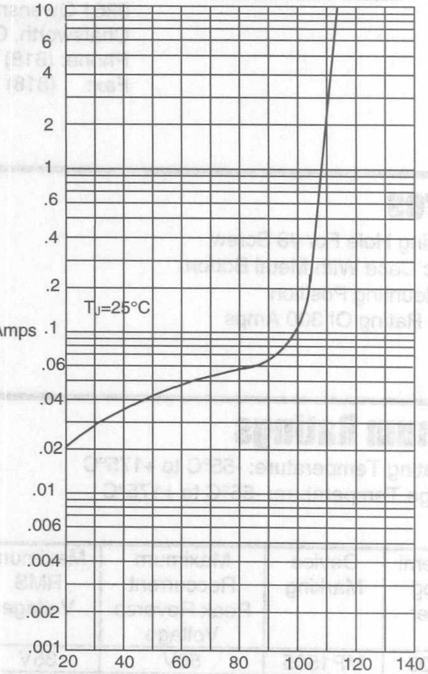
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.580	.620	14.70	15.70	2PL
B	.230	.270	5.8	6.9	
C	---	.750	---	19.20	
D	.405	.444	10.30	11.30	2PL
E	.038	.042	.97	1.10	4PL/TYP
G	.145	---	3.70	---	Ø

Figure 1
Typical Forward Characteristics



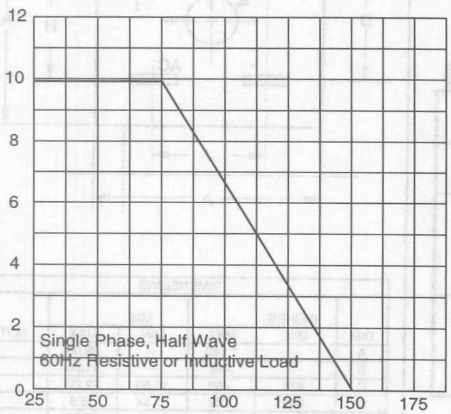
Instantaneous Forward Current - Amperes *versus* Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



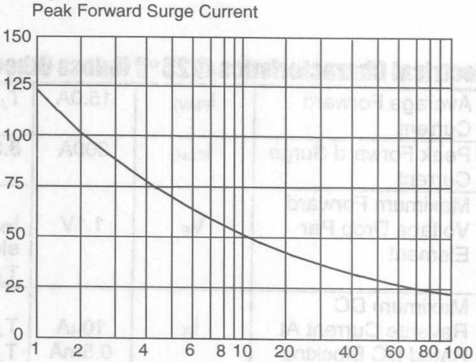
Instantaneous Reverse Leakage Current - MicroAmperes *versus* Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus* Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

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Phone: (818) 701-4933
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MP1505 THRU MP1510

15 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 300 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

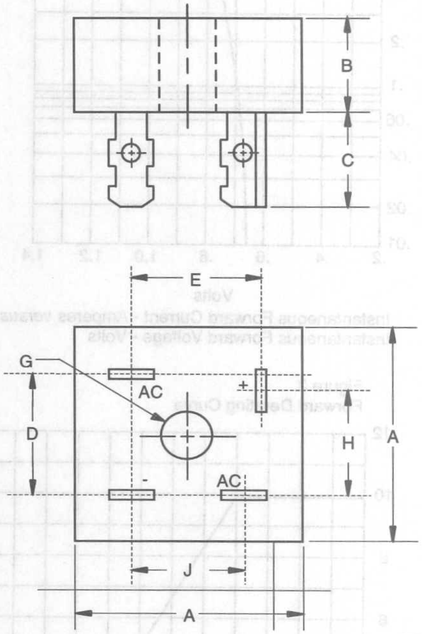
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP1505	MP1505	50V	35V	50V
MP151	MP151	100V	70V	100V
MP152	MP152	200V	140V	200V
MP154	MP154	400V	280V	400V
MP156	MP156	600V	420V	600V
MP158	MP158	800V	560V	800V
MP1510	MP1510	1000v	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	15.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 7.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 µsec, Duty cycle 1%

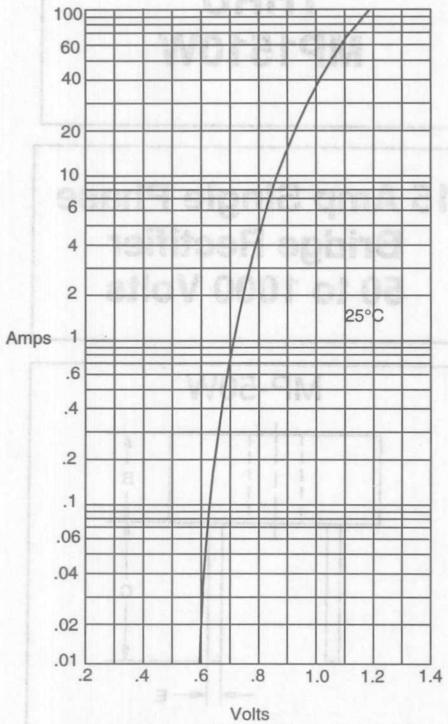
MP-50



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	.425	.480	10.80	12.20	
D	.693	.732	17.54	18.6	
E	.637	.677	16.20	17.20	
G	.188	---	4.77	---	Ø
H	.633	.673	16.10	17.10	
J	.543	.582	13.80	14.80	

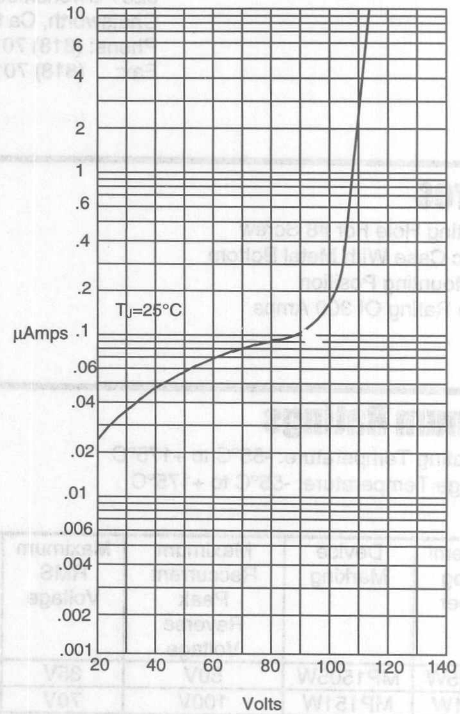
MP1505 thru MP1510

Figure 1
Typical Forward Characteristics



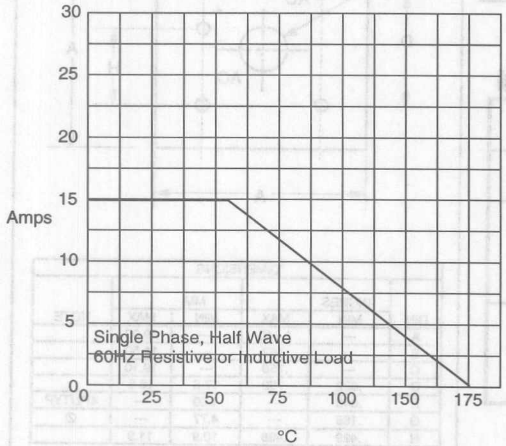
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



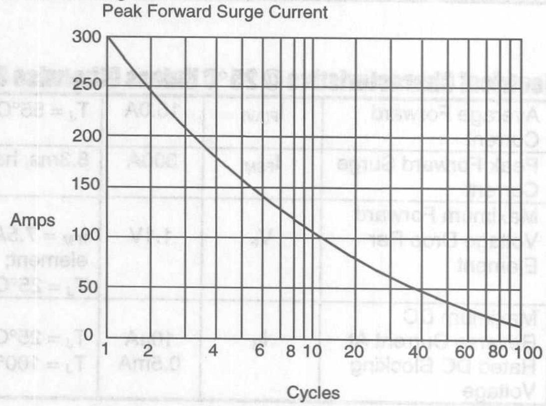
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Phone: (818) 701-4933
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MP1505W THRU MP1510W

15 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 300 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

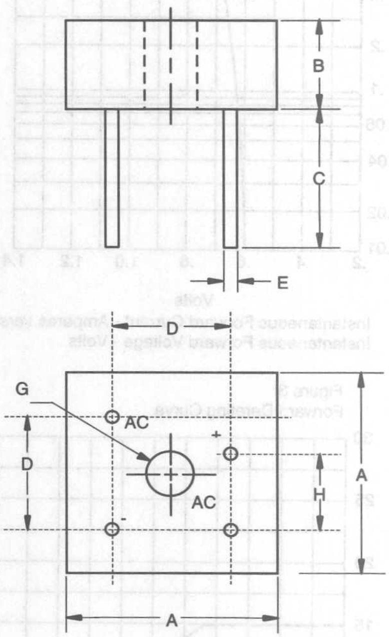
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP1505W	MP1505W	50V	35V	50V
MP151W	MP151W	100V	70V	100V
MP152W	MP152W	200V	140V	200V
MP154W	MP154W	400V	280V	400V
MP156W	MP156W	600V	420V	600V
MP158W	MP158W	800V	560V	800V
MP1510W	MP1510W	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	15.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 7.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

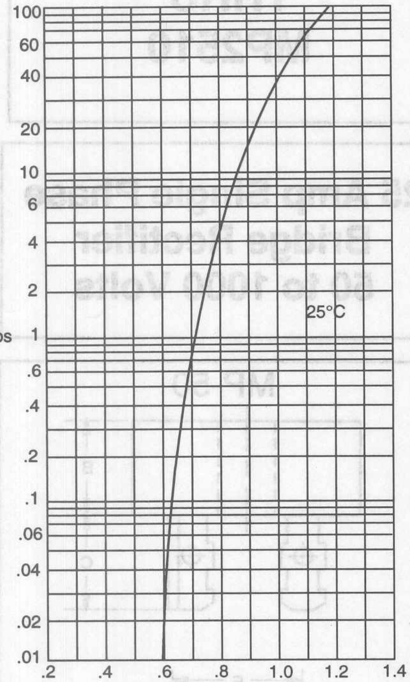
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MP-50W



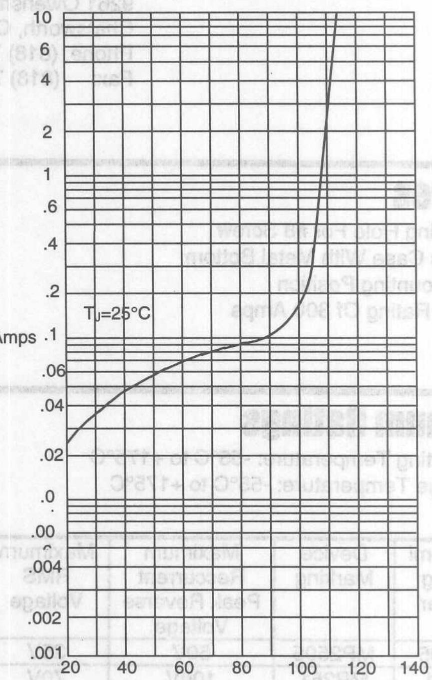
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	---	.750	---	19.10	
D	.692	.732	17.6	18.6	
E	.040	---	1.00	---	4PL/TYP
G	.188	---	4.77	---	Ø
H	.429	.468	10.9	11.9	

Figure 1
Typical Forward Characteristics



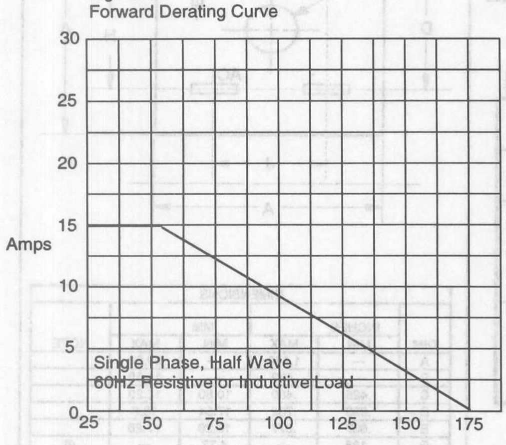
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



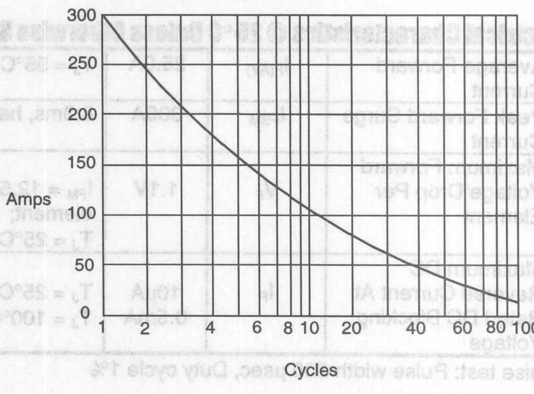
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA
Microsemi
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9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MP2505 THRU MP2510

25 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 300 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

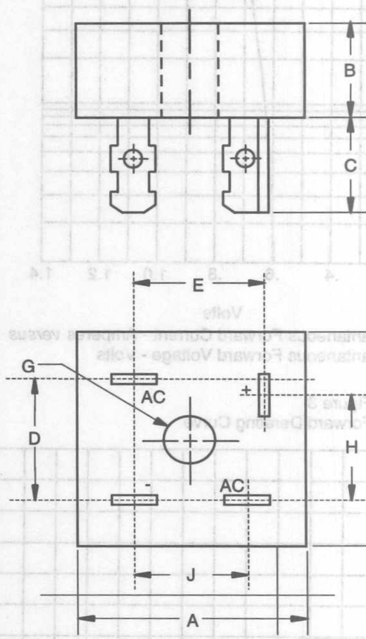
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP2505	MP2505	50V	35V	50V
MP251	MP251	100V	70V	100V
MP252	MP252	200V	140V	200V
MP254	MP254	400V	280V	400V
MP256	MP256	600V	420V	600V
MP258	MP258	800V	560V	800V
MP2510	MP2510	1000v	700V	1000v

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	25.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 12.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

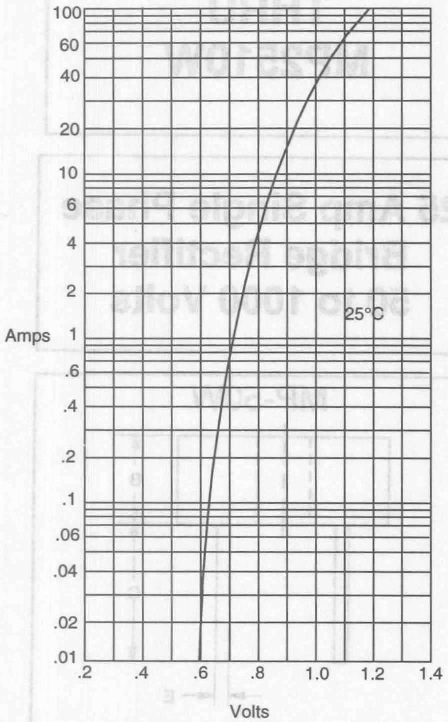
*Pulse test: Pulse width 300 μsec, Duty cycle 1%

MP-50



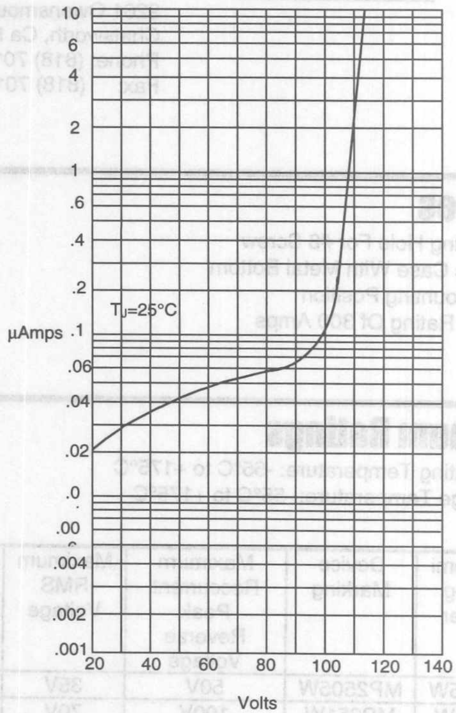
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	.425	.480	10.80	12.20	
D	.693	.732	17.54	18.6	
E	.637	.677	16.20	17.20	
G	.188	---	4.77	---	Ø
H	.633	.673	16.10	17.10	
J	.543	.582	13.80	14.80	

Figure 1
Typical Forward Characteristics



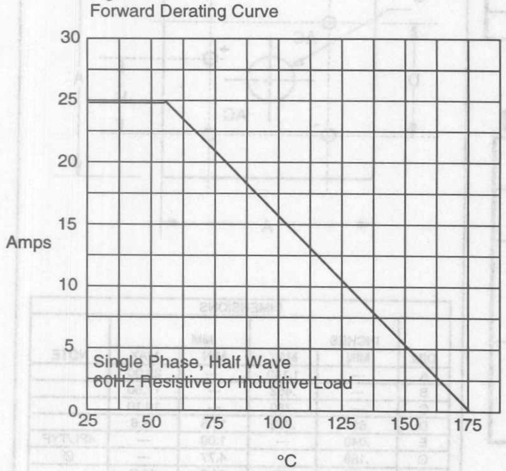
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



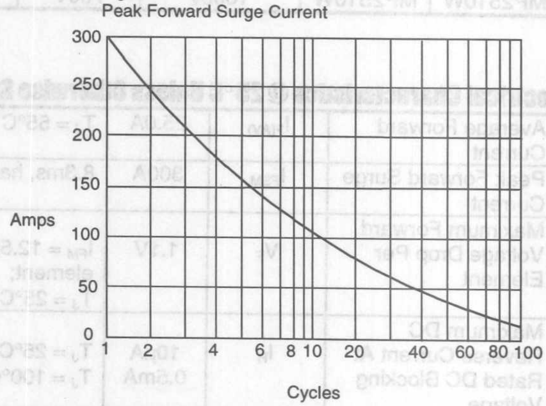
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi
Chatsworth, CA
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9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MP2505W THRU MP2510W

25 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 300 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

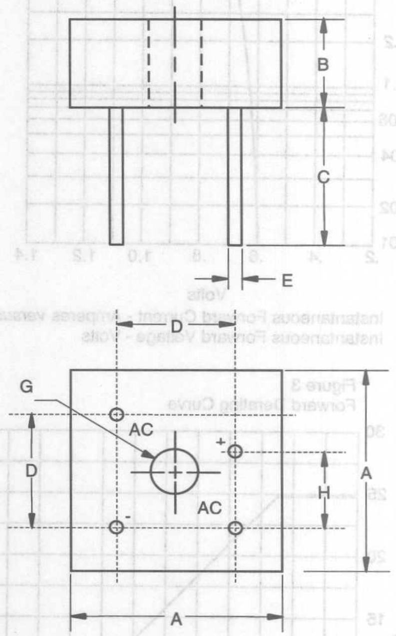
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP2505W	MP2505W	50V	35V	50V
MP251W	MP251W	100V	70V	100V
MP252W	MP252W	200V	140V	200V
MP254W	MP254W	400V	280V	400V
MP256W	MP256W	600V	420V	600V
MP258W	MP258W	800V	560V	800V
MP2510W	MP2510W	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	25.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 12.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 µsec, Duty cycle 1%

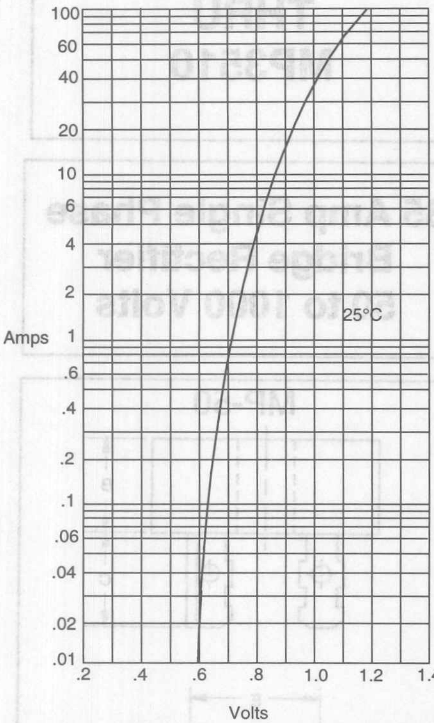
MP-50W



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	---	.750	---	19.10	
D	.692	.732	17.6	18.6	
E	.040	---	1.00	---	4PL/TYP
G	.188	---	4.77	---	Ø
H	.429	.468	10.9	11.9	

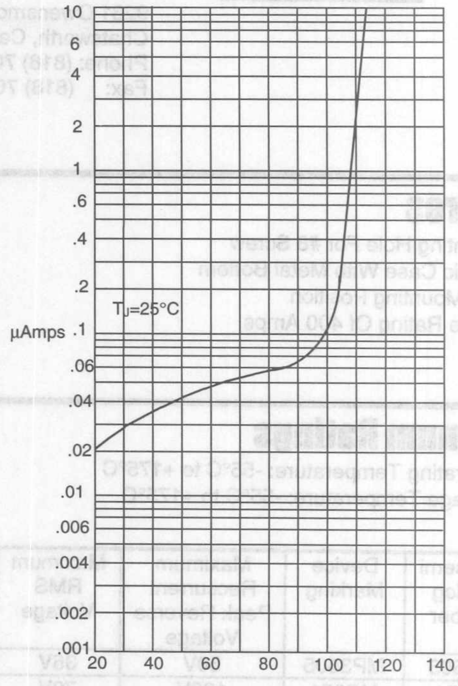
MP2505W thru MP2510W

Figure 1
Typical Forward Characteristics



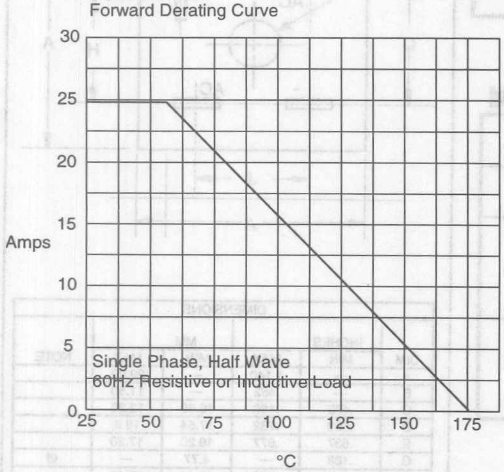
Instantaneous Forward Current - Amperes *versus* Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



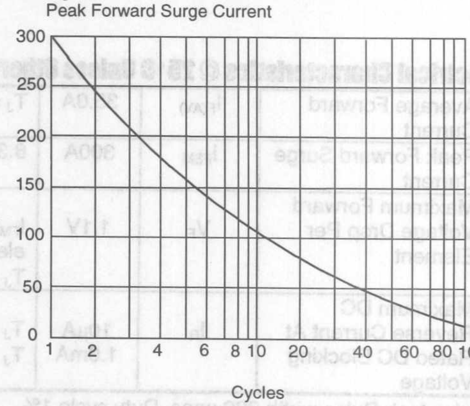
Instantaneous Reverse Leakage Current - MicroAmperes *versus* Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus* Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

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MP3505 THRU MP3510

35 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 400 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

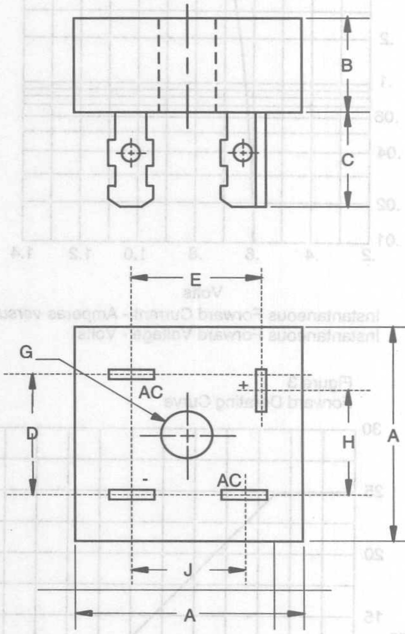
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP3505	MP3505	50V	35V	50V
MP351	MP351	100V	70V	100V
MP352	MP352	200V	140V	200V
MP354	MP354	400V	280V	400V
MP356	MP356	600V	420V	600V
MP358	MP358	800V	560V	800V
MP3510	MP3510	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	35.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 17.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 1.0mA	$T_J = 25°C$ $T_J = 100°C$

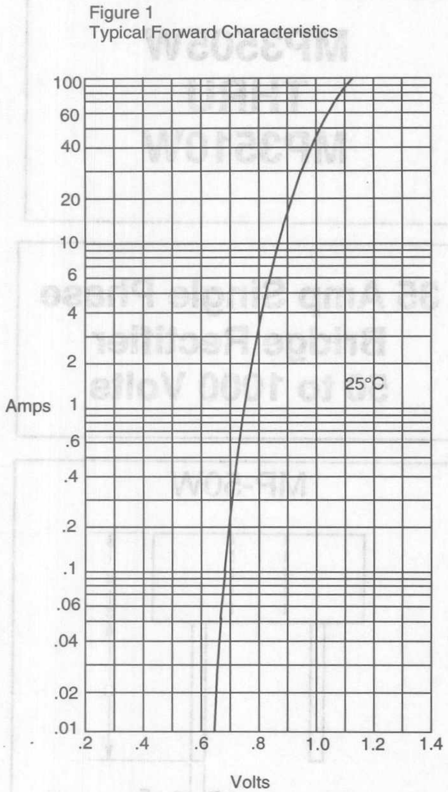
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MP-50

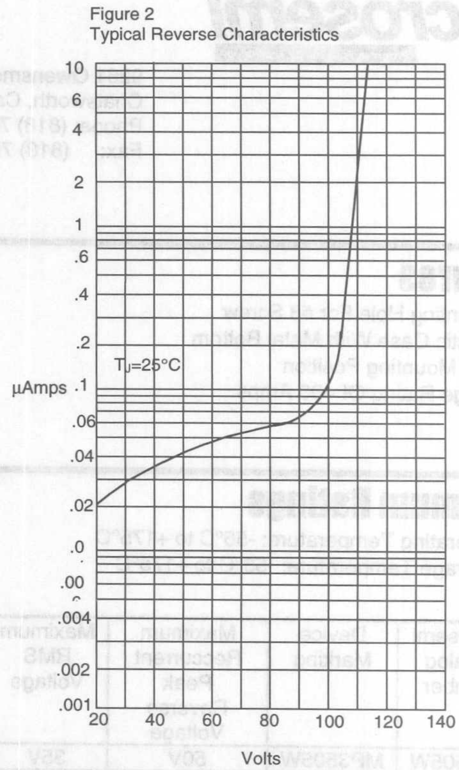


DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	.425	.480	10.80	12.20	
D	.693	.732	17.54	18.6	
E	.637	.677	16.20	17.20	
G	.188	---	4.77	---	Ø
H	.633	.673	16.10	17.10	
J	.543	.582	13.80	14.80	

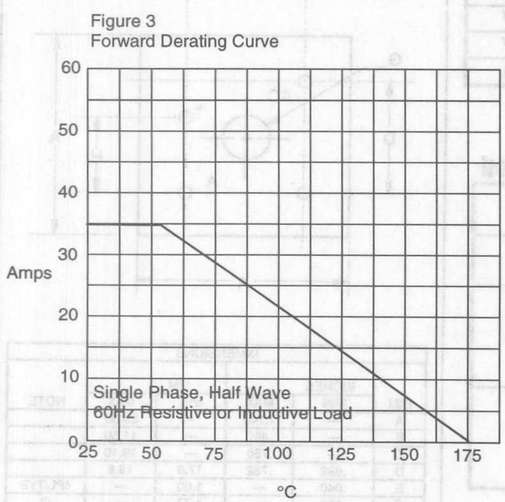
MP3505 thru MP3510



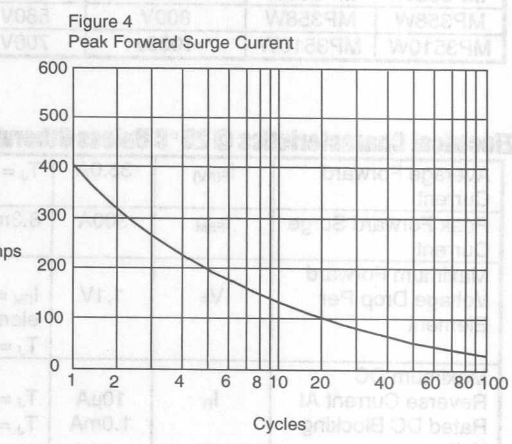
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Fax: (818) 701-4939

MP3505W THRU MP3510W

35 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 400 Amps

Maximum Ratings

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

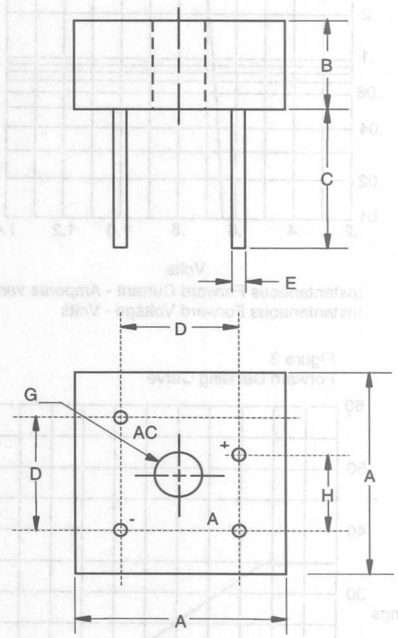
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP3505W	MP3505W	50V	35V	50V
MP351W	MP351W	100V	70V	100V
MP352W	MP352W	200V	140V	200V
MP354W	MP354W	400V	280V	400V
MP356W	MP356W	600V	420V	600V
MP358W	MP358W	800V	560V	800V
MP3510W	MP3510W	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	35.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	300A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.1V	$I_{FM} = 17.5A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 1.0mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 µsec, Duty cycle 1%

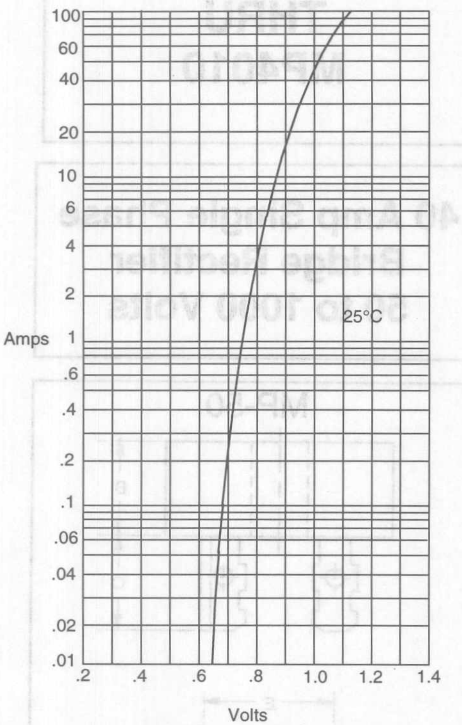
MP-50W



DIMENSIONS					
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	---	.750	---	19.10	
D	.692	.732	17.6	18.6	
E	.040	---	1.00	---	4PL/TYP
G	.188	---	4.77	---	Ø
H	.429	.468	10.9	11.9	

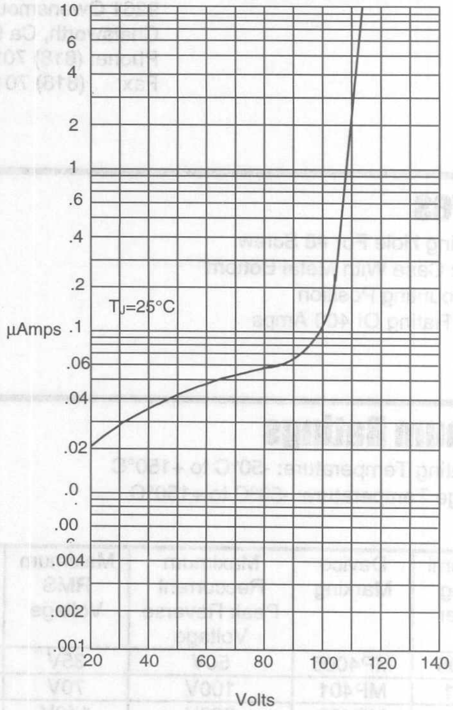
MP3505W thru MP3510W

Figure 1
Typical Forward Characteristics



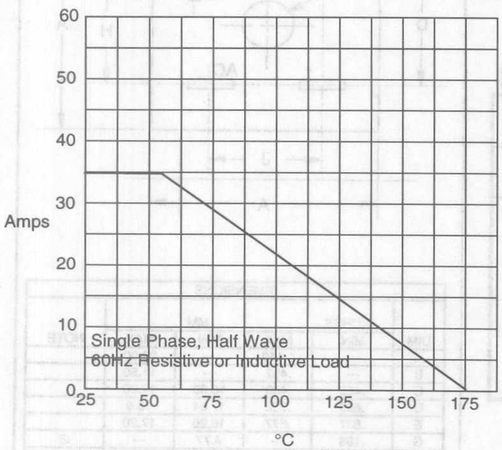
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



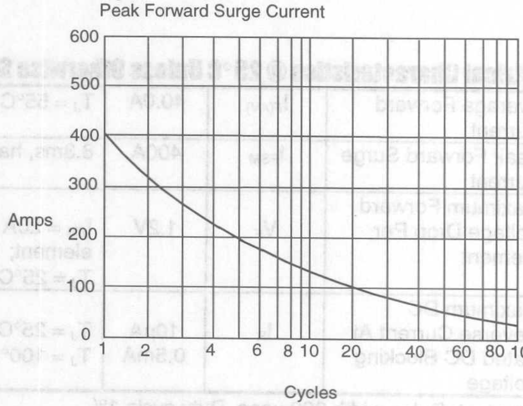
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA
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Chatsworth, Ca 91311
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Fax: (818) 701-4939

MP4005
THRU
MP4010

40 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 400 Amps

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C

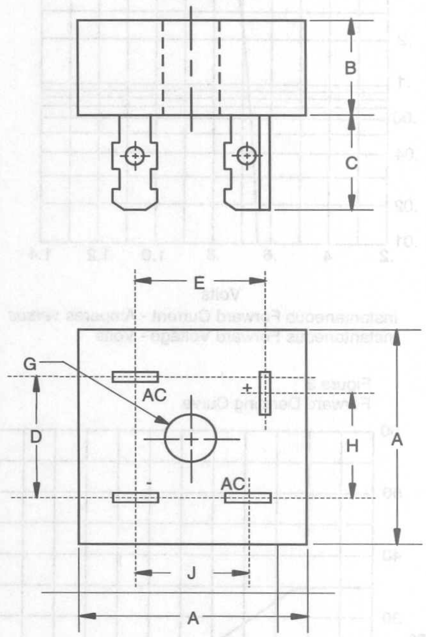
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP4005	MP4005	50V	35V	50V
MP401	MP401	100V	70V	100V
MP402	MP402	200V	140V	200V
MP404	MP404	400V	280V	400V
MP406	MP406	600V	420V	600V
MP408	MP408	800V	560V	800V
MP4010	MP4010	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	40.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	400A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.2V	$I_{FM} = 20A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

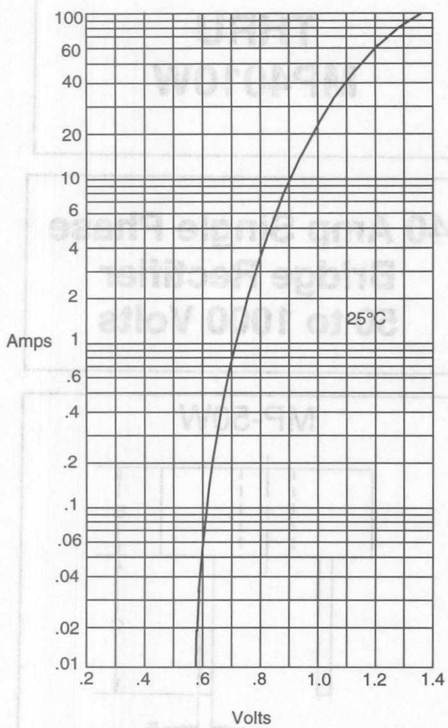
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MP-50



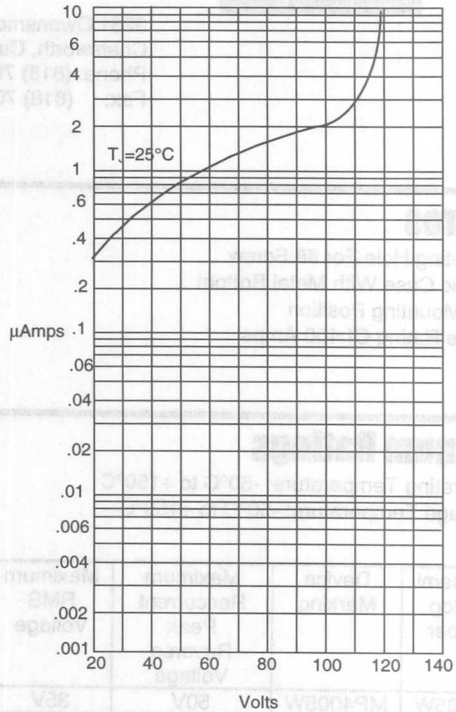
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	.425	.480	10.80	12.20	
D	.693	.732	17.54	18.6	
E	.637	.677	16.20	17.20	
G	.188	---	4.77	---	∅
H	.633	.673	16.10	17.10	
J	.543	.582	13.80	14.80	

Figure 1
Typical Forward Characteristics



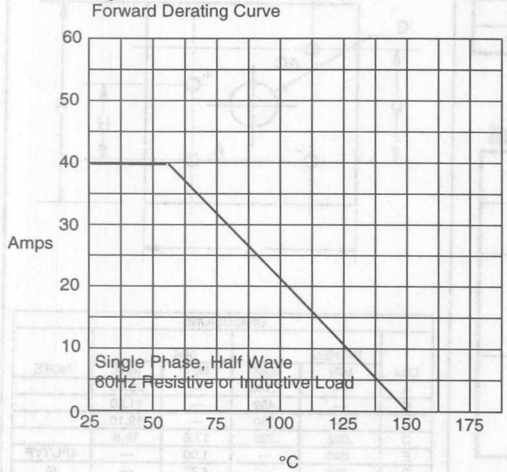
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



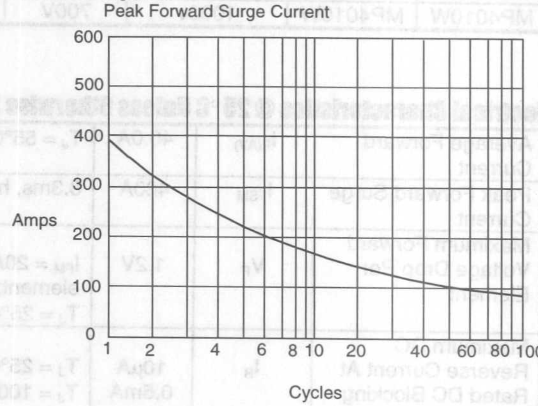
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi
Chatsworth, CA
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9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MP4005W THRU MP4010W

40 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 400 Amps

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C

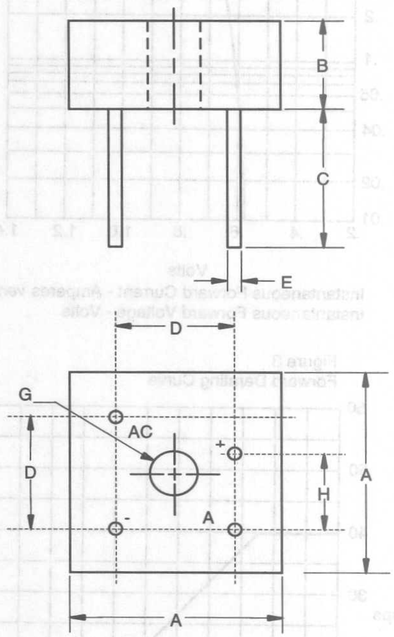
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP4005W	MP4005W	50V	35V	50V
MP401W	MP401W	100V	70V	100V
MP402W	MP402W	200V	140V	200V
MP404W	MP404W	400V	280V	400V
MP406W	MP406W	600V	420V	600V
MP408W	MP408W	800V	560V	800V
MP4010W	MP4010W	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	40.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	400A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.2V	$I_{FM} = 20A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 μsec, Duty cycle 1%

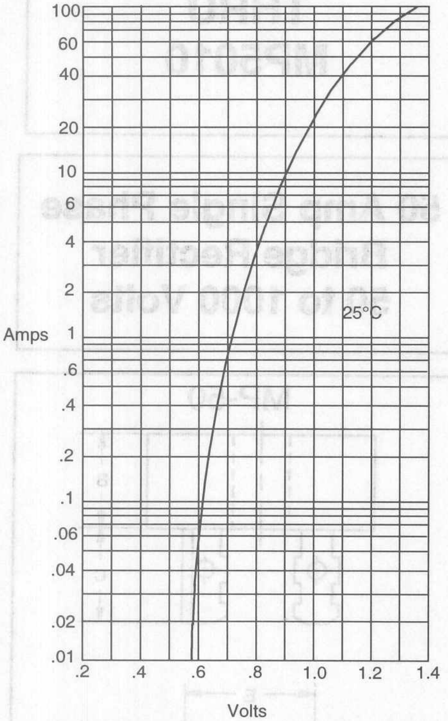
MP-50W



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	---	.750	---	19.10	
D	.692	.732	17.6	18.6	
E	.040	---	1.00	---	4PL/TYP
G	.188	---	4.77	---	Ø
H	.429	.468	10.9	11.9	

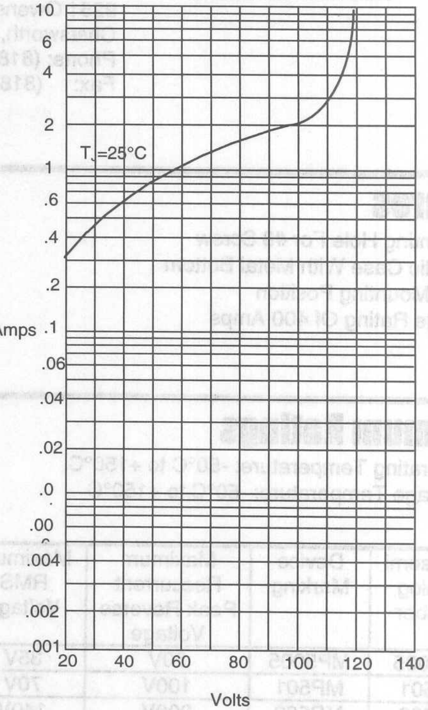
MP4005W thru MP4010W

Figure 1
Typical Forward Characteristics



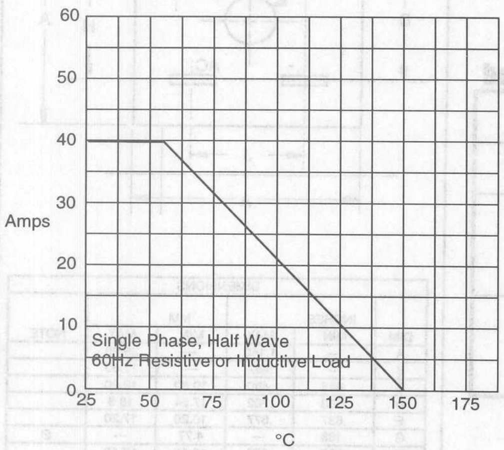
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



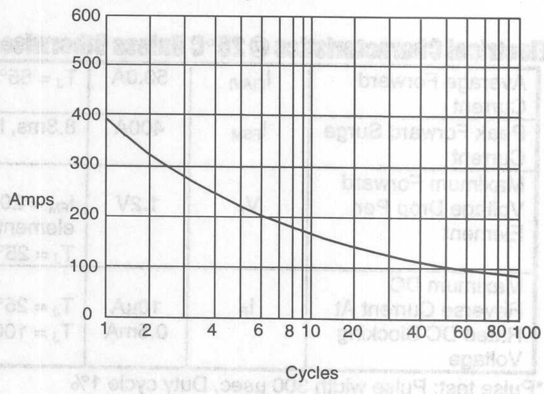
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA
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Phone: (818) 701-4933
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MP5005 THRU MP5010

50 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 400 Amps

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C

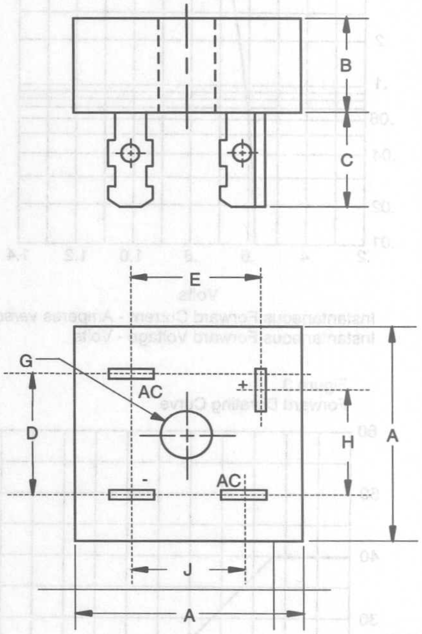
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP5005	MP5005	50V	35V	50V
MP501	MP501	100V	70V	100V
MP502	MP502	200V	140V	200V
MP504	MP504	400V	280V	400V
MP506	MP506	600V	420V	600V
MP508	MP508	800V	560V	800V
MP5010	MP5010	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	50.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	400A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.2V	$I_{FM} = 20A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

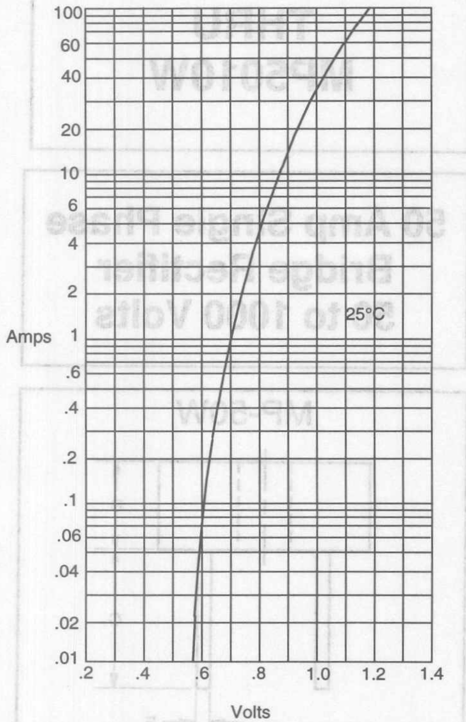
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

MP-50



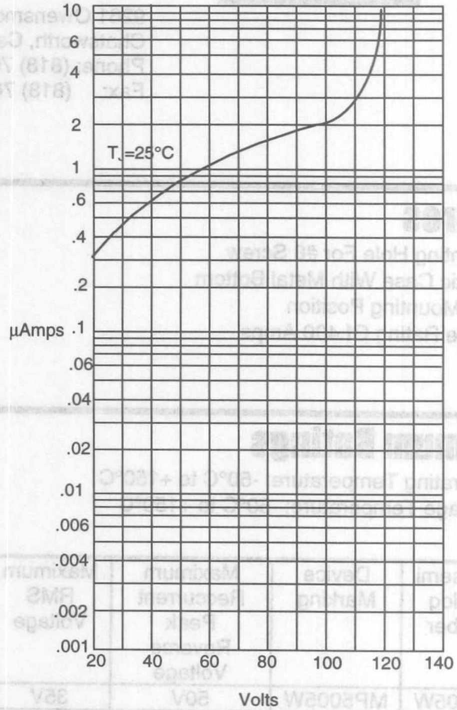
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	.425	.480	10.80	12.20	
D	.693	.732	17.54	18.6	
E	.637	.677	16.20	17.20	
G	.188	---	4.77	---	∅
H	.633	.673	16.10	17.10	
J	.543	.582	13.80	14.80	

Figure 1
Typical Forward Characteristics



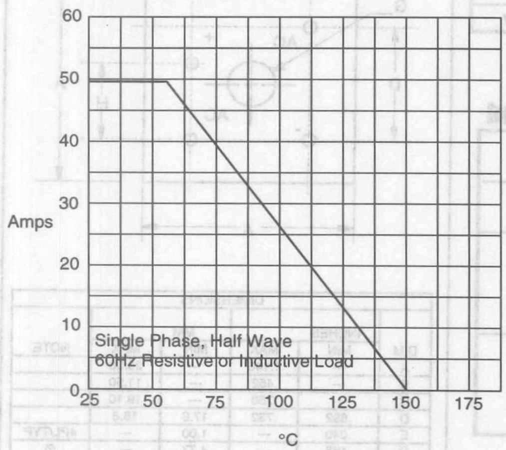
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



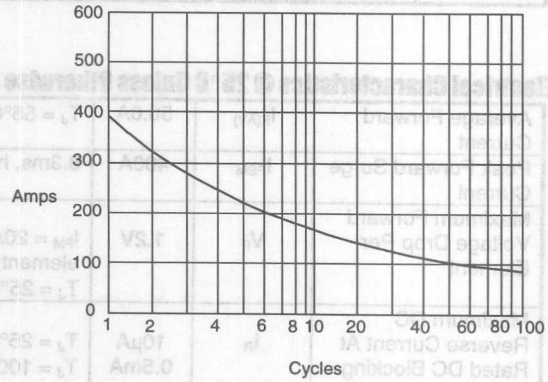
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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MP5005W THRU MP5010W

50 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #8 Screw
- Plastic Case With Metal Bottom
- Any Mounting Position
- Surge Rating Of 400 Amps

Maximum Ratings

- Operating Temperature: -50°C to +150°C
- Storage Temperature: -50°C to +150°C

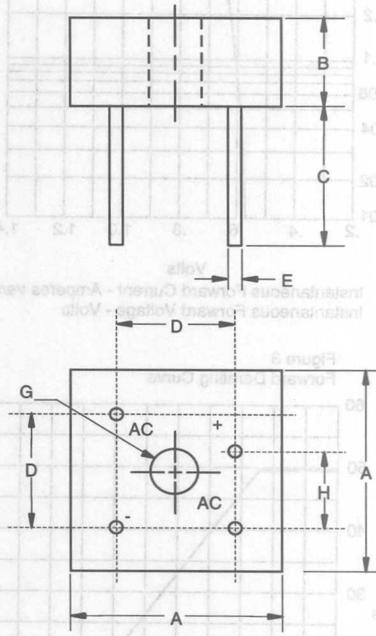
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
MP5005W	MP5005W	50V	35V	50V
MP501W	MP501W	100V	70V	100V
MP502W	MP502W	200V	140V	200V
MP504W	MP504W	400V	280V	400V
MP506W	MP506W	600V	420V	600V
MP508W	MP508W	800V	560V	800V
MP5010W	MP5010W	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	50.0A	$T_J = 55°C$
Peak Forward Surge Current	I_{FSM}	400A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.2V	$I_{FM} = 20A$ per element; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 0.5mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 µsec, Duty cycle 1%

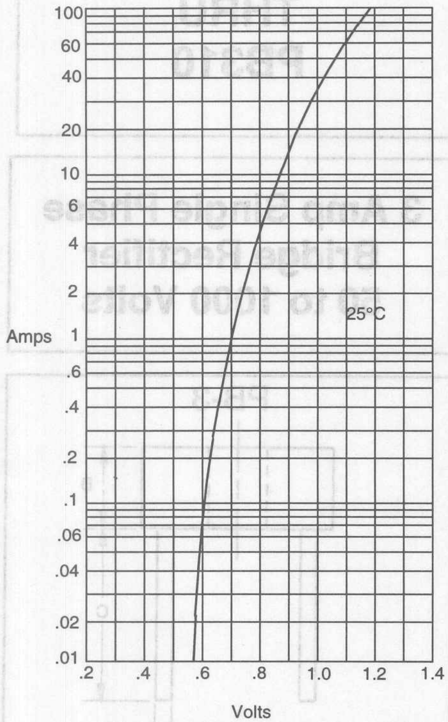
MP-50W



DIMENSIONS					
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	---	1.140	---	29.00	
B	---	.452	---	11.50	
C	---	.750	---	19.10	
D	.692	.732	17.6	18.6	
E	.040	---	1.00	---	4PL/TYP
G	.188	---	4.77	---	Ø
H	.429	.468	10.9	11.9	

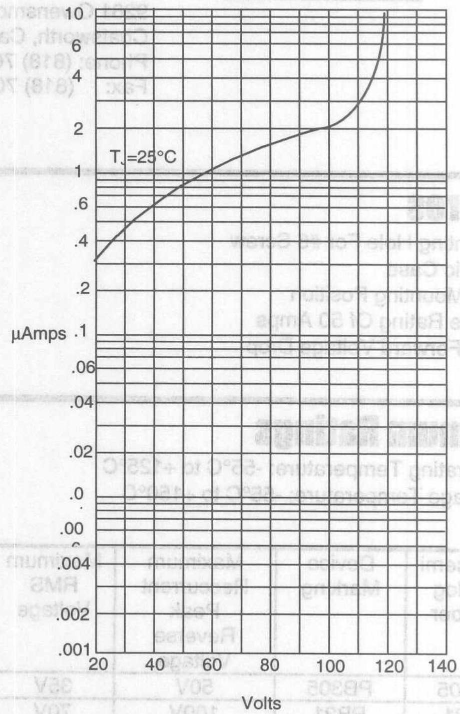
MP5005W thru MP5010W

Figure 1
Typical Forward Characteristics



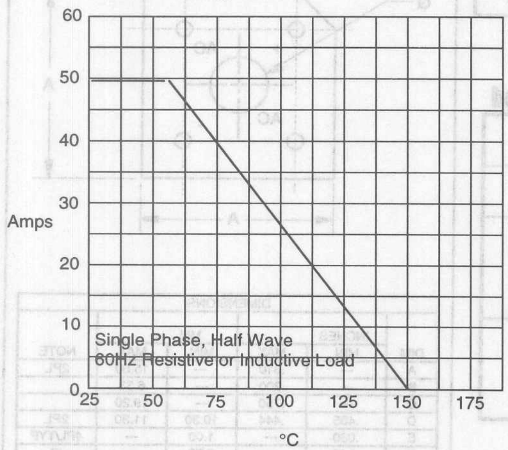
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



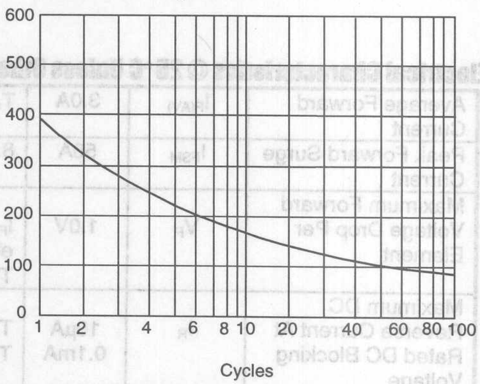
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Case Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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PB305 THRU PB310

3 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #6 Screw
- Plastic Case
- Any Mounting Position
- Surge Rating Of 50 Amps
- Low Forward Voltage Drop

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

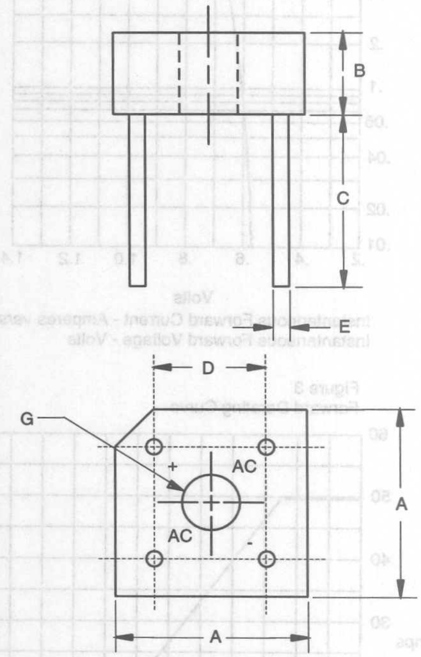
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
PB305	PB305	50V	35V	50V
PB31	PB31	100V	70V	100V
PB32	PB32	200V	140V	200V
PB34	PB34	400V	280V	400V
PB36	PB36	600V	420V	600V
PB38	PB38	800V	560V	800V
PB310	PB310	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	$T_C = 50°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.0V	$I_{FM} = 1.5A$ per element; $T_A = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.1mA	$T_J = 25°C$ $T_J = 100°C$

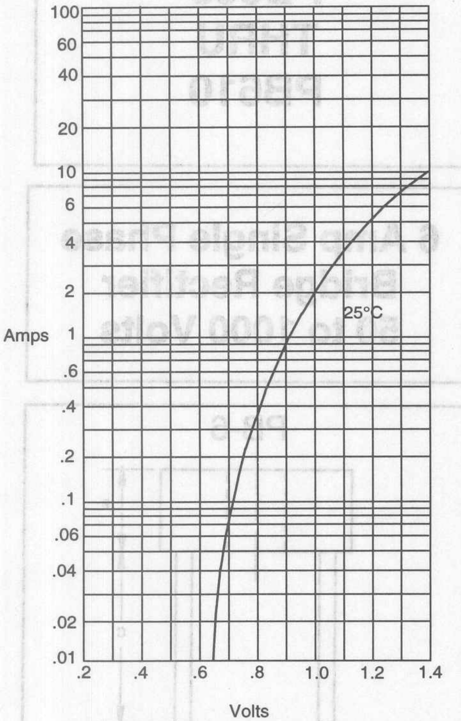
*Pulse test: Pulse width 300 μsec, Duty cycle 1%

PB-3



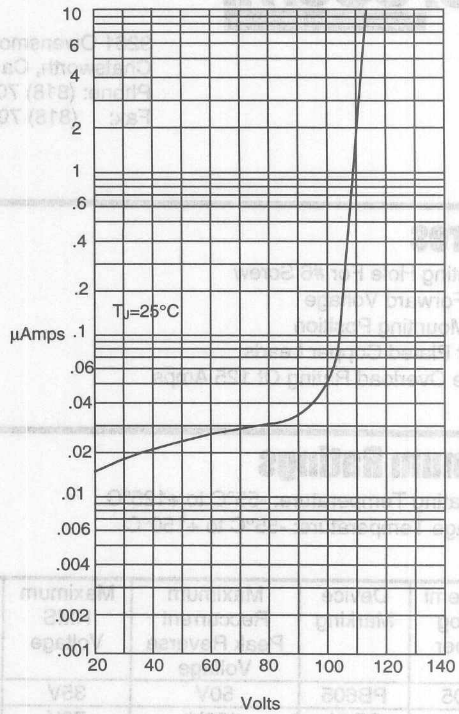
DIMENSIONS					
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	---	.610	---	15.50	2PL
B	---	.200	---	6.33	
C	---	.750	---	19.20	
D	.405	.444	10.30	11.30	2PL
E	.030	---	1.00	---	4PL/TYP
G	.145	---	3.70	---	Ø

Figure 1
Typical Forward Characteristics



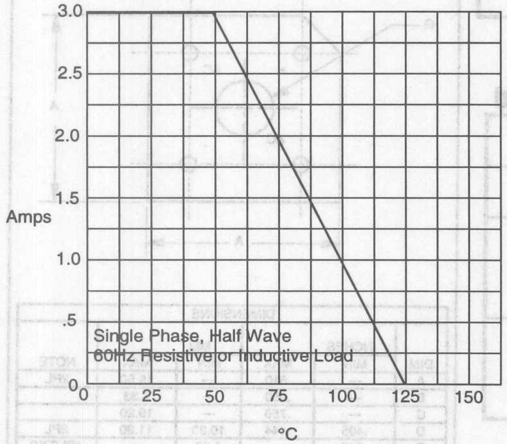
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



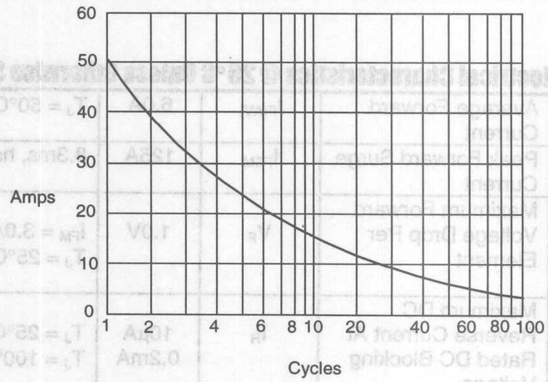
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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PB605 THRU PB610

6 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Mounting Hole For #6 Screw
- Low Forward Voltage
- Any Mounting Position
- Silver Plated Copper Leads
- Surge Overload Rating Of 125 Amps

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

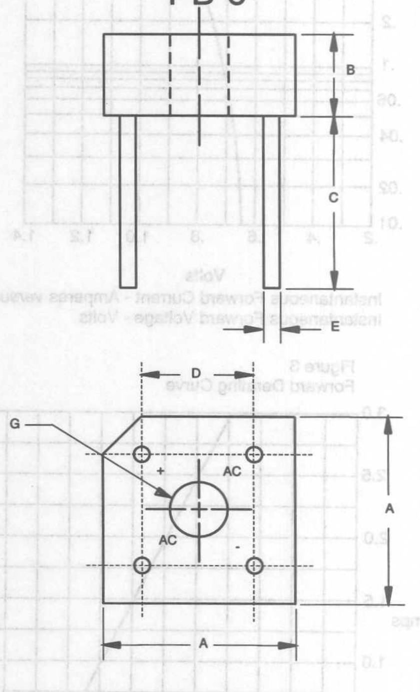
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
PB605	PB605	50V	35V	50V
PB61	PB61	100V	70V	100V
PB62	PB62	200V	140V	200V
PB64	PB64	400V	280V	400V
PB66	PB66	600V	420V	600V
PB68	PB68	800V	560V	800V
PB610	PB610	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6.0A	$T_J = 50°C$
Peak Forward Surge Current	I_{FSM}	125A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.0V	$I_{FM} = 3.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.2mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 μsec, Duty cycle 1%

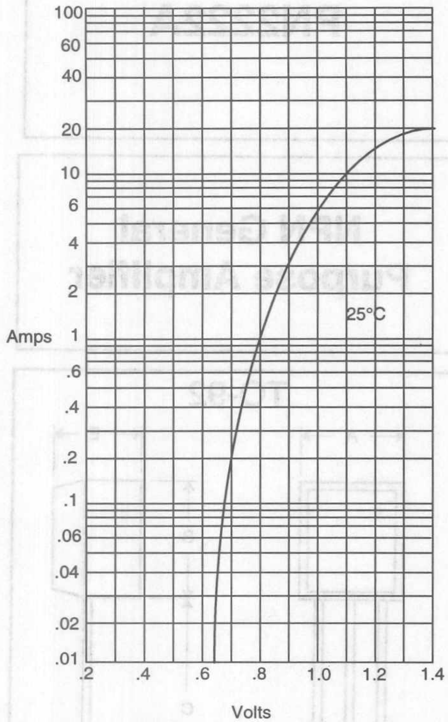
PB-6



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.610	---	15.50	2PL
B	---	.250	---	6.33	
C	---	.750	---	19.20	
D	.405	.444	10.30	11.30	2PL
E	.040	---	1.00	---	4PL/TYP
G	.145	---	3.70	---	Ø

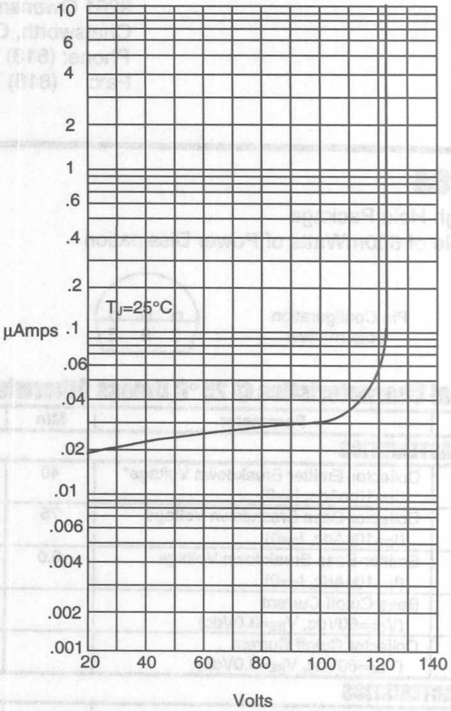
PB605 thru PB610

Figure 1
Typical Forward Characteristics



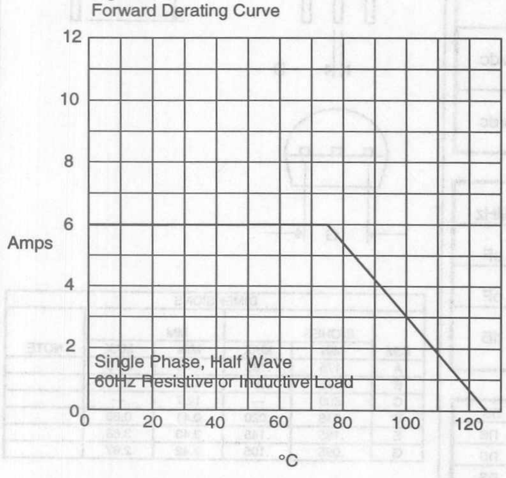
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



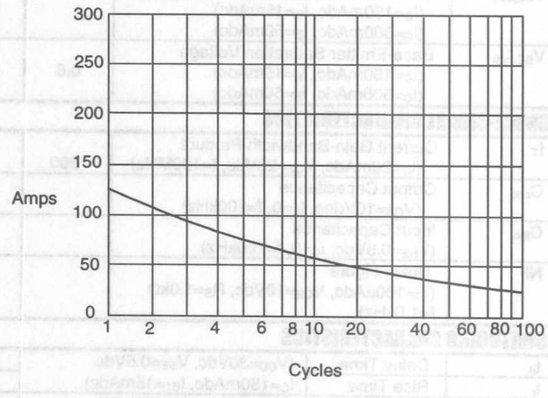
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Fax: (818) 701-4939

PN2222A

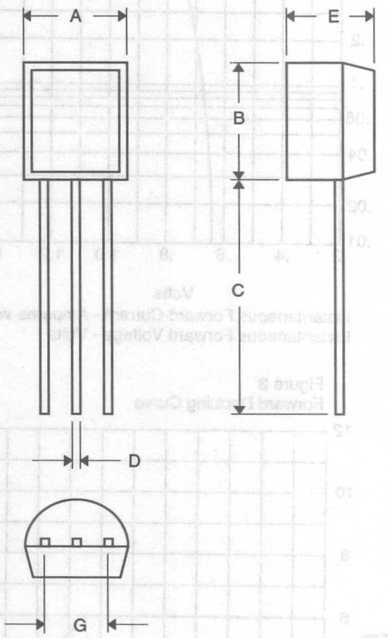
NPN General Purpose Amplifier

Features

- Through Hole Package
- Capable of 600mWatts of Power Dissipation

Pin Configuration
Bottom View

TO-92



DIMENSIONS					
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

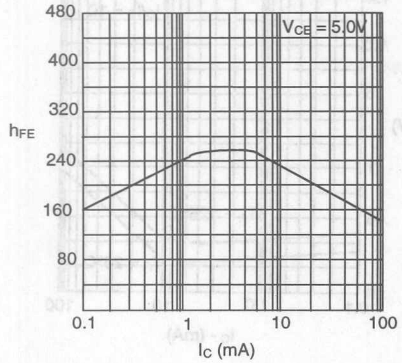
Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=10mAdc, I_B=0)	40		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10μAdc, I_E=0)	75		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10μAdc, I_C=0)	6.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=60Vdc, V_{BE}=3.0Vdc)		20	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=60Vdc, V_{BE}=3.0Vdc)		10	nAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain*			
	(I_C=0.1mAdc, V_{CE}=10Vdc)	35		
	(I_C=1.0mAdc, V_{CE}=10Vdc)	50		
	(I_C=10mAdc, V_{CE}=10Vdc)	75	300	
	(I_C=150mAdc, V_{CE}=10Vdc)	100		
	(I_C=150mAdc, V_{CE}=1.0Vdc)	50		
	(I_C=500mAdc, V_{CE}=10Vdc)	40		
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage			Vdc
	(I_C=150mAdc, I_B=15mAdc)		0.3	
	(I_C=500mAdc, I_B=50mAdc)		1.0	
$V_{BE(sat)}$	Base-Emitter Saturation Voltage			Vdc
	(I_C=150mAdc, I_B=15mAdc)	0.6	1.2	
	(I_C=500mAdc, I_B=50mAdc)		2.0	
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=20mAdc, V_{CE}=20Vdc, f=100MHz)	300		MHz
C_{obo}	Output Capacitance (V_{CB}=10Vdec, I_E=0, f=100kHz)		8.0	pF
C_{ibo}	Input Capacitance (V_{BE}=0.5Vdc, I_C=0, f=100kHz)		25	pF
NF	Noise Figure (I_C=100μAdc, V_{CE}=10Vdc, R_S=1.0kΩ f=1.0kHz)		4.0	dB
SWITCHING CHARACTERISTICS				
t_d	Delay Time (V_{CC}=30Vdc, V_{BE}=0.5Vdc		10	ns
t_r	Rise Time I_C=150mAdc, I_{B1}=15mAdc)		25	ns
t_s	Storage Time (V_{CC}=30Vdc, I_C=150mAdc		225	ns
t_f	Fall Time I_{B1}=I_{B2}=15mAdc)		60	ns

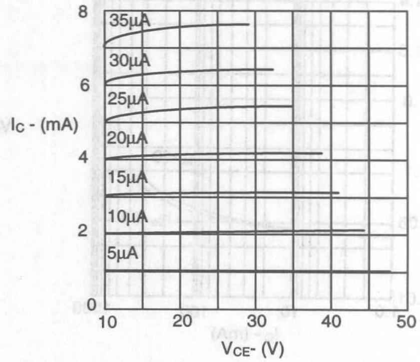
*Pulse Width ≤ 300μs, Duty Cycle ≤ 2.0%

PN2222A

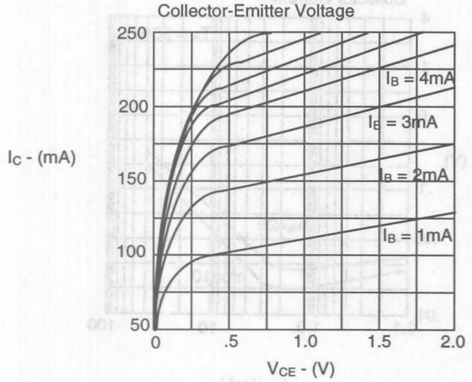
DC Current Gain vs Collector Current



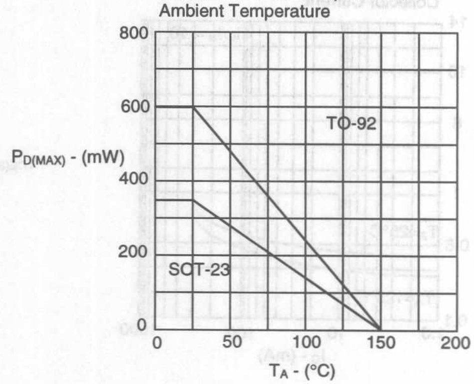
Collector Current vs Collector-Emitter Voltage



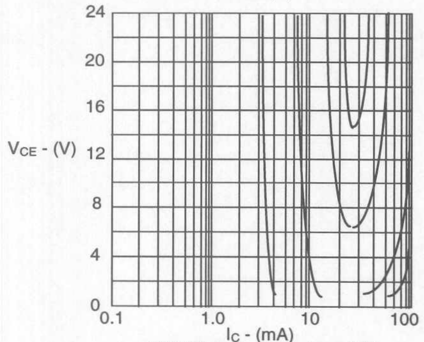
Collector Current vs Collector-Emitter Voltage



Maximum Power Dissipation vs Ambient Temperature

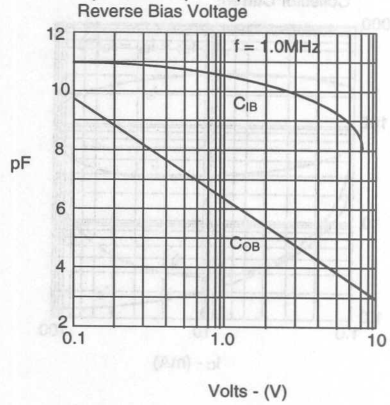


Contours of Constant Gain Bandwidth Product (f_T)

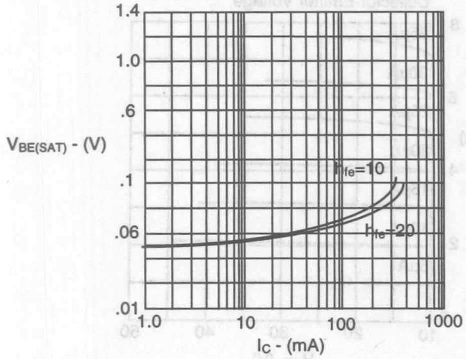


*50MHz increments from 150 to 250MHz and 260MHz

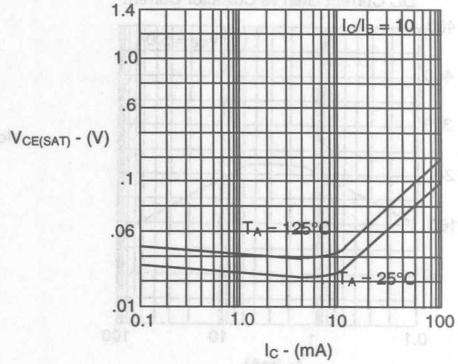
Input and Output Capacitance vs Reverse Bias Voltage



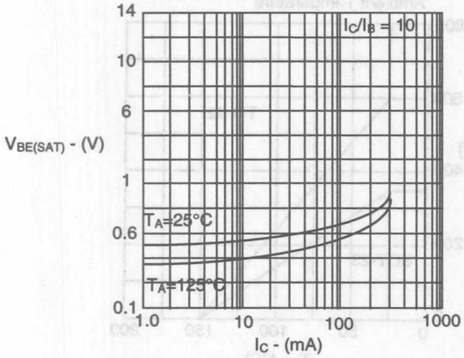
Base Saturation Voltage vs Collector Current



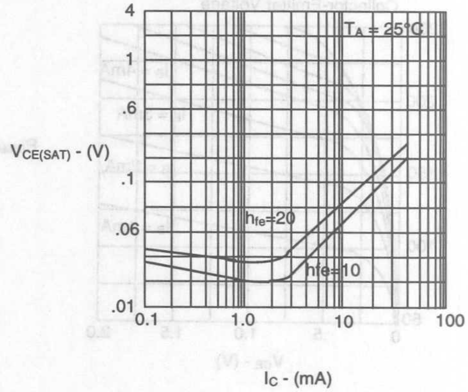
Collector Saturation Voltage vs Collector Current



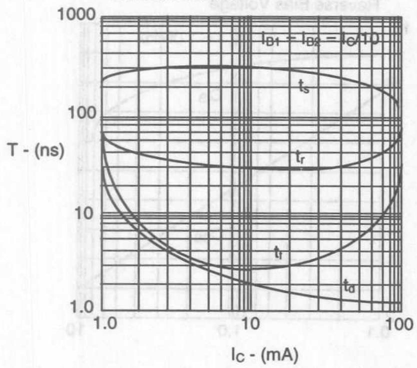
Base Saturation Voltage vs Collector Current



Collector Saturation Voltage vs Collector Current



Switching Times vs Collector Current



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PN2907A

PNP General Purpose Amplifier

Features

- Through Hole Package
- Capable of 600mWatts of Power Dissipation

Pin Configuration
Bottom View

Electrical Characteristics @ 25°C Unless Otherwise Specified

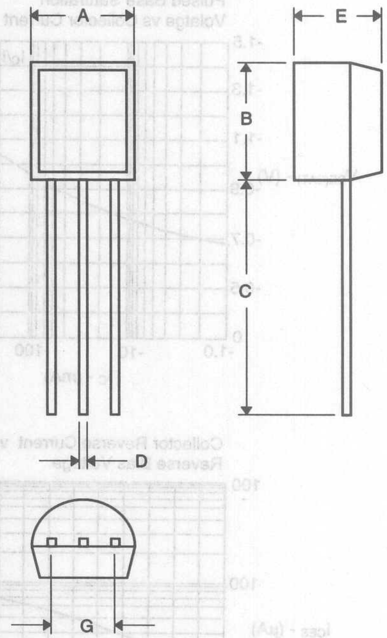
Symbol	Parameter	Min	Max	Units
OFF CHARACTERISTICS				
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage* (I_C=10mAdc, I_B=0)	60		Vdc
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=10µAdc, I_E=0)	60		Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=10µAdc, I_C=0)	5.0		Vdc
I_{BL}	Base Cutoff Current (V_{CE}=30Vdc, V_{BE}=0.5Vdc)		50	nAdc
I_{CEX}	Collector Cutoff Current (V_{CE}=30Vdc, V_{BE}=0.5Vdc)		50	nAdc
I_{CBO}	Collector Cutoff Current (V_{CB}=50Vdc, I_E=0) (V_{CB}=50Vdc, I_E=0, T_A=150°C)		 0.1 10.0	µAdc
ON CHARACTERISTICS				
h_{FE}	DC Current Gain* (I_C=0.1mAdc, V_{CE}=10Vdc) (I_C=1.0mAdc, V_{CE}=10Vdc) (I_C=10mAdc, V_{CE}=10Vdc) (I_C=150mAdc, V_{CE}=10Vdc) (I_C=500mAdc, V_{CE}=10Vdc)	 75 100 100 100 50	 300 	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=150mAdc, I_B=15mAdc) (I_C=500mAdc, I_B=50mAdc)		 0.4 1.6	Vdc
$V_{BE(sat)}$	Base-Emitter Saturation Voltage (I_C=150mAdc, I_B=15mAdc) (I_C=500mAdc, I_B=50mAdc)		 1.3 2.6	Vdc
SMALL-SIGNAL CHARACTERISTICS				
f_T	Current Gain-Bandwidth Product (I_C=50mAdc, V_{CE}=20Vdc, f=100MHz)	200		MHz
C_{cbo}	Output Capacitance (V_{CB}=10Vdc, I_E=0, f=100kHz)		8.0	pF
C_{ibo}	Input Capacitance (V_{EB}=2.0Vdc, I_C=0, f=100kHz)		30.0	pF

SWITCHING CHARACTERISTICS

Symbol	Parameter	Conditions	Max	Units
t_d	Delay Time	(V_{CC}=3.0Vdc, I_C=150mAdc,	10	ns
t_r	Rise Time	I_{B1}=15mAdc)	40	ns
t_s	Storage Time	(V_{CC}=3.0Vdc, I_C=150mAdc	80	ns
t_f	Fall Time	I_{B1}=I_{B2}=15mAdc)	30	ns

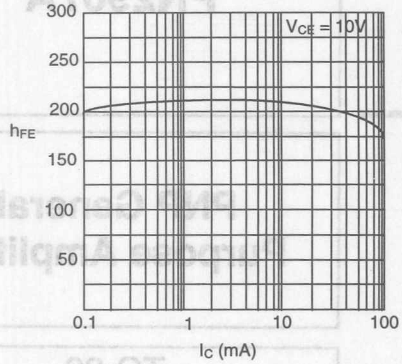
*Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

TO-92

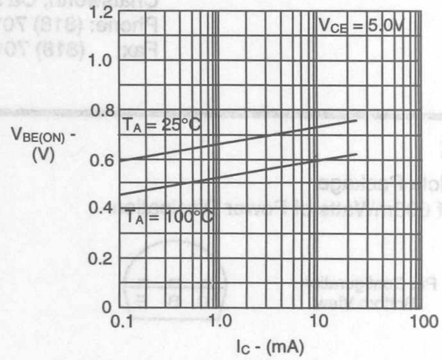


DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

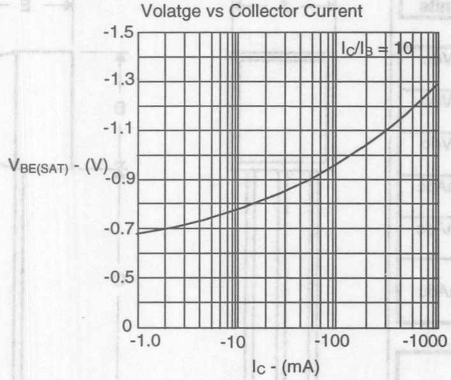
DC Current Gain vs Collector Current



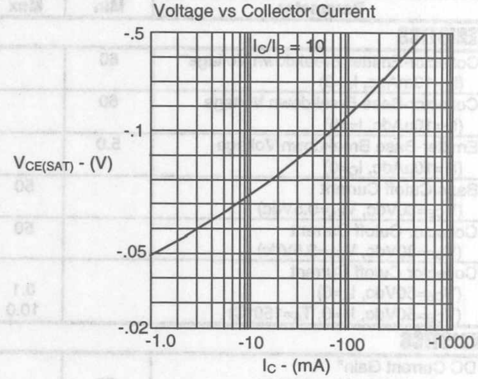
Base-Emitter ON Voltage vs Collector Current



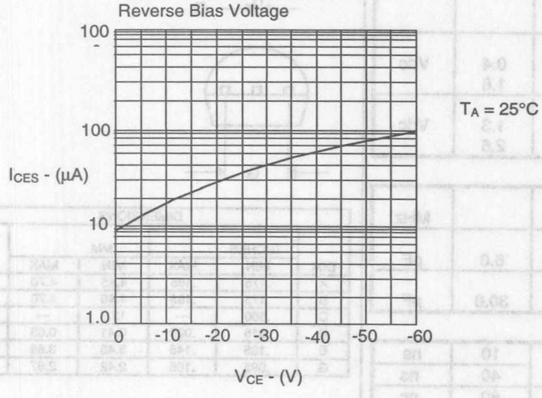
Pulsed Base Saturation Volatge vs Collector Current



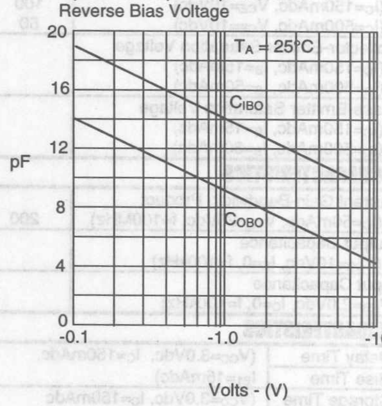
Pulsed Collector Saturation Voltage vs Collector Current



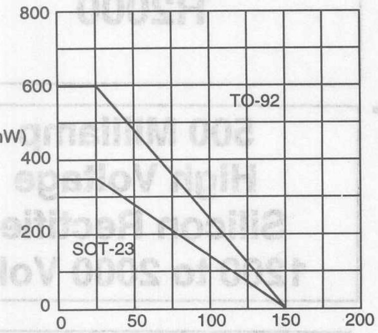
Collector Reverse Current vs Reverse Bias Voltage



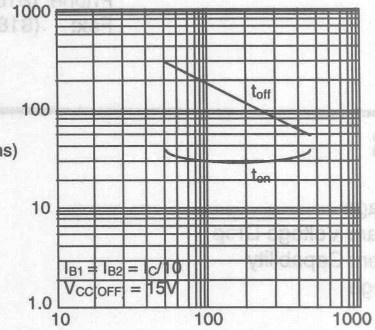
Input and Output Capacitances vs Reverse Bias Voltage



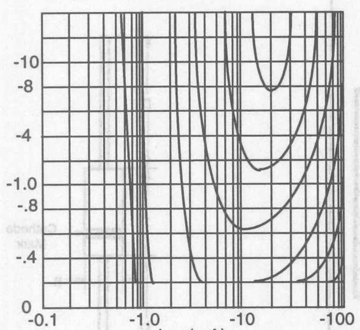
Maximum Power Dissipation vs Ambient Temperature



Turn On and Turn Off Times vs Collector Current

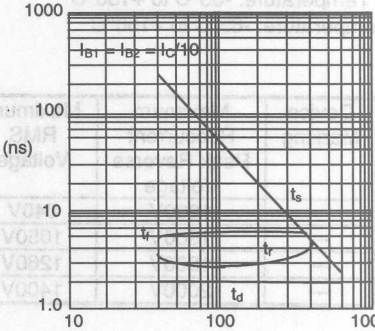


Contours of Constant Gain Bandwidth Product (f_T)



*25MHz increments from 50 to 200MHz

Switching Times vs Collector Current



Microsemi
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R1200 THRU R2000

500 Milliamp High Voltage Silicon Rectifier 1200 to 2000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- High Voltage

Maximum Ratings

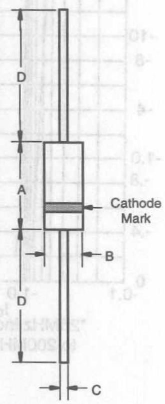
- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
R1200	---	1200V	840V	1200V
R1500	---	1500V	1050V	1500V
R1800	---	1800V	1260V	1800V
R2000	---	2000V	1400V	2000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	500mA	$T_A = 50°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage R1200-R1800 R2000	V_F	1.6V 2.6V	$I_{FM} = 0.5A$; $T_A = 50°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 50µA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	30pF	Measured at 1.0MHz, V_R=4.0V

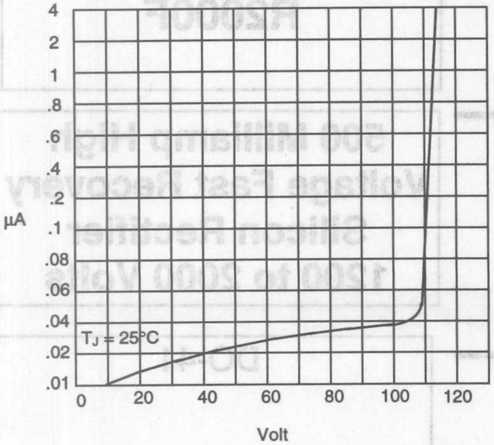
DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

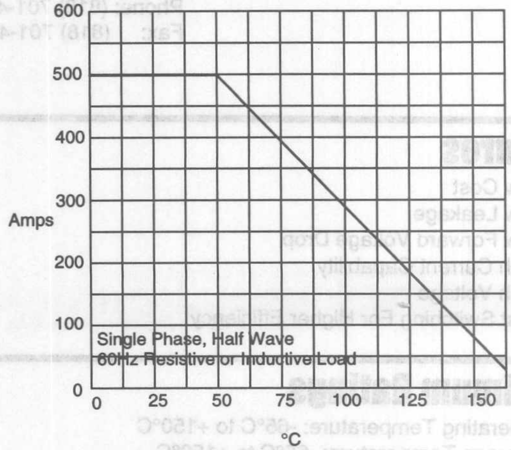
R1200 - R2000

Figure 1
Typical Reverse Characteristics



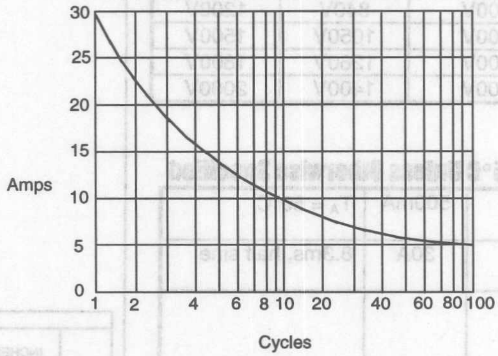
Instantaneous Reverse Current - Micro Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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R1200F THRU R2000F

500 Milliamp High Voltage Fast Recovery Silicon Rectifier 1200 to 2000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- High Voltage
- Fast Switching For Higher Efficiency

Maximum Ratings

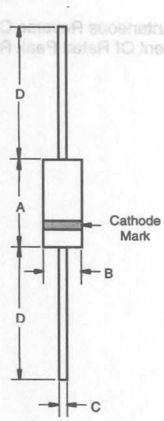
- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
R1200	---	1200V	840V	1200V
R1500	---	1500V	1050V	1500V
R1800	---	1800V	1260V	1800V
R2000	---	2000V	1400V	2000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

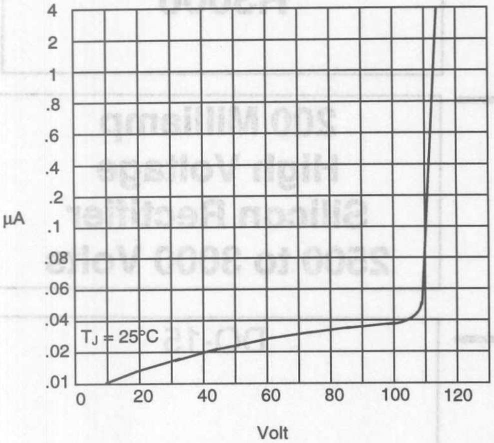
Average Forward Current	$I_{F(AV)}$	500mA	$T_A = 50°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage R1200-R1800 R2000	V_F	1.6V 2.6V	$I_{FM} = 0.5A$; $T_A = 50°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 50µA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	30pF	Measured at 1.0MHz, V_R=4.0V
Maximum Reverse Recovery Time	T_{rr}	500nS	

DO-41



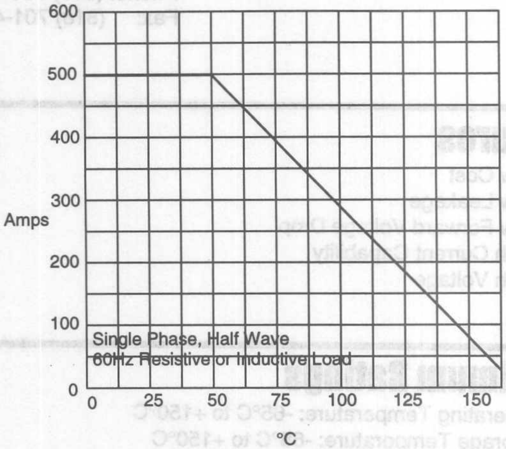
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Reverse Characteristics



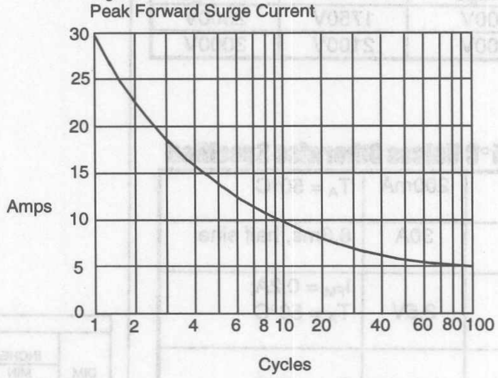
Instantaneous Reverse Current - Micro Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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R2500 THRU R3000

200 Milliamp High Voltage Silicon Rectifier 2500 to 3000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- High Voltage

Maximum Ratings

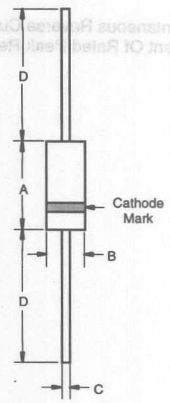
- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
R2500	---	2500V	1750V	2500V
R3000	---	3000V	2100V	3000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

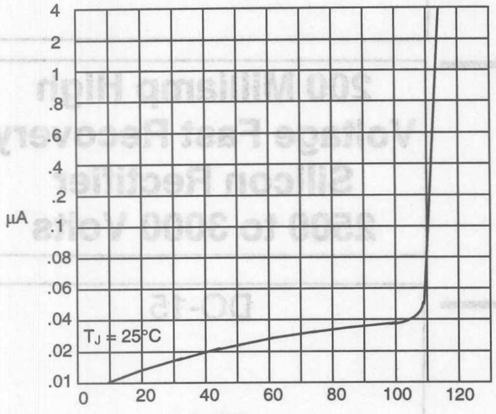
Average Forward Current	$I_{F(AV)}$	200mA	$T_A = 50°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	2.6V	$I_{FM} = 0.2A$; $T_A = 50°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	30pF	Measured at 1.0MHz, V_R=4.0V

DO-15



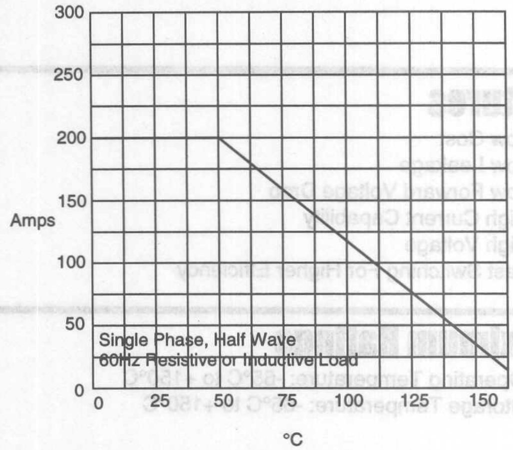
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Reverse Characteristics



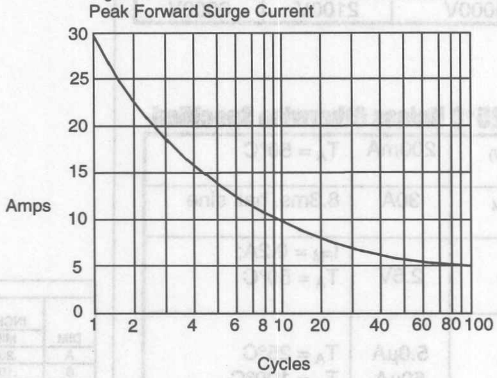
Instantaneous Reverse Current - Micro Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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R2500F THRU R3000F

200 Milliamp High Voltage Fast Recovery Silicon Rectifier 2500 to 3000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- High Voltage
- Fast Switching For Higher Efficiency

Maximum Ratings

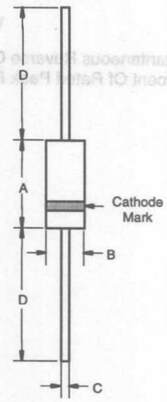
- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
R2500	---	2500V	1750V	2500V
R3000	---	3000V	2100V	3000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

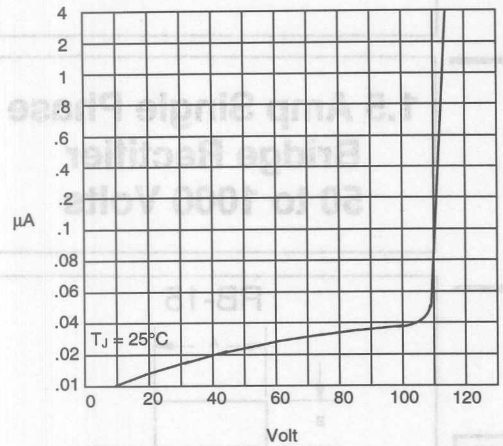
Average Forward Current	$I_{F(AV)}$	200mA	$T_A = 50°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	2.6V	$I_{FM} = 0.2A$; $T_A = 50°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 50µA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	30pF	Measured at 1.0MHz, V_R=4.0V
Maximum Reverse Recovery Time	T_{rr}	500nS	

DO-15



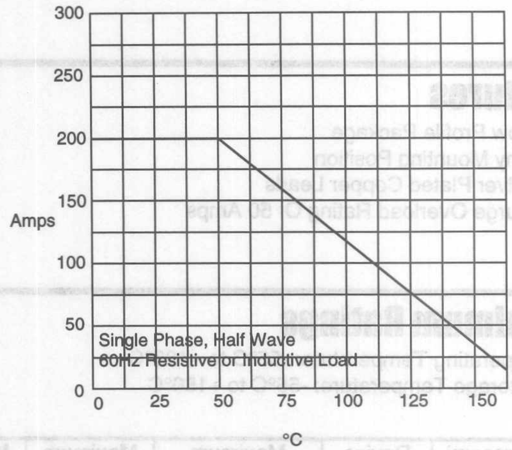
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Reverse Characteristics



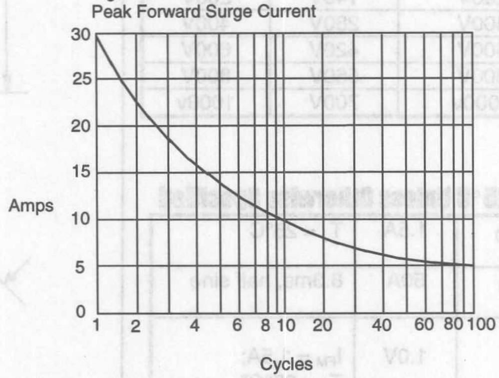
Instantaneous Reverse Current - Micro Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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RB151
THRU
RB157

1.5 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Low Profile Package
- Any Mounting Position
- Silver Plated Copper Leads
- Surge Overload Rating Of 50 Amps

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

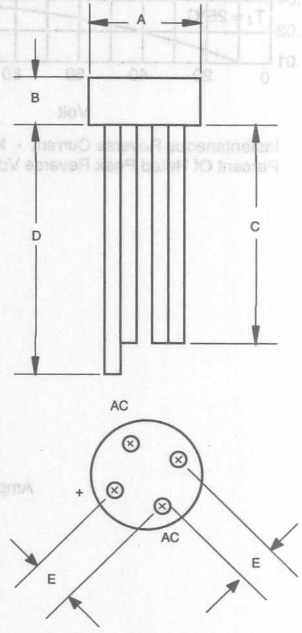
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RB151	RB151	50V	35V	50V
RB152	RB152	100V	70V	100V
RB153	RB153	200V	140V	200V
RB154	RB154	400V	280V	400V
RB155	RB155	600V	420V	600V
RB156	RB156	800V	560V	800V
RB157	RB157	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.5A	$T_J = 25°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.0V	$I_{FM} = 1.5A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 1mA	$T_J = 25°C$ $T_J = 100°C$

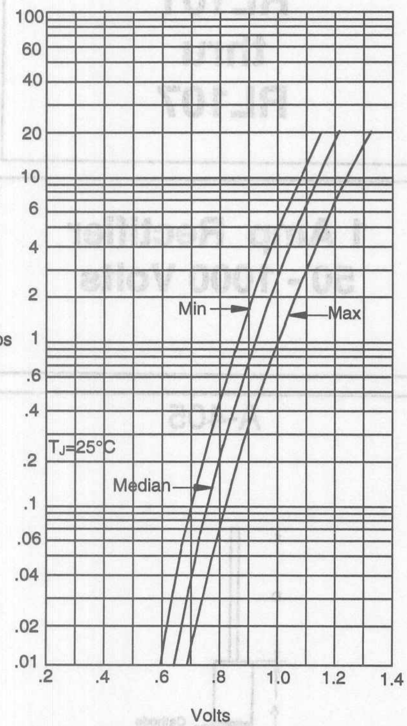
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

RB-15



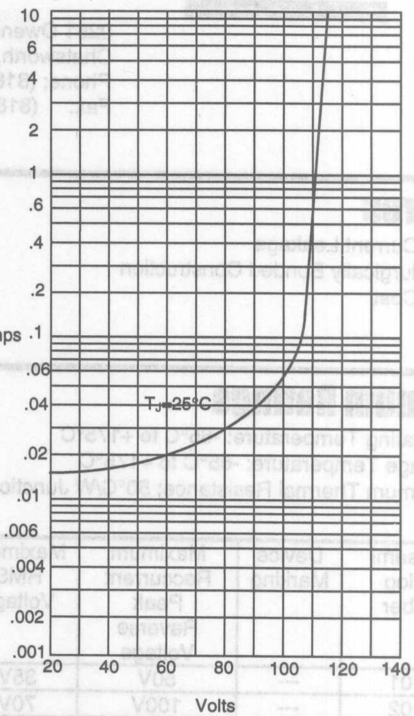
DIMENSIONS					
DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	---	.358	---	9.10	
B	---	.157	---	4.00	
C	1.000	---	25.40	---	
D	1.200	---	30.50	---	
E	.180	.220	4.60	5.60	

Figure 1
Typical Forward Characteristics



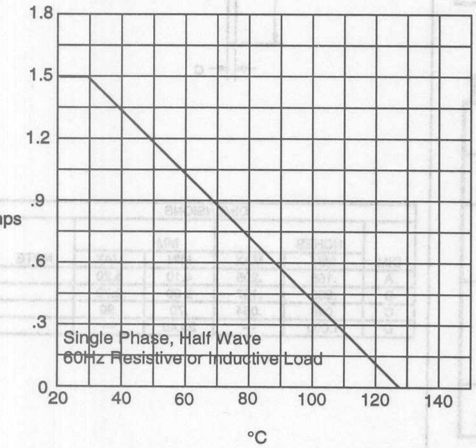
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



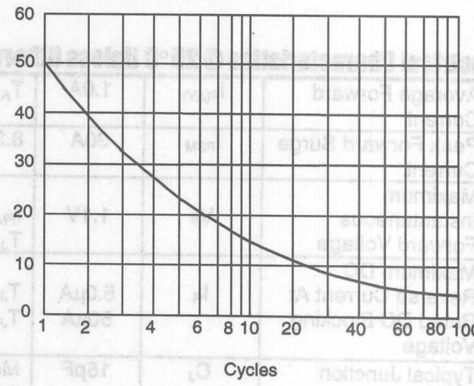
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

RL101
thru
RL107

1 Amp Rectifier
50 - 1000 Volts

Features

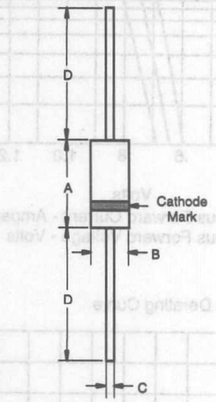
- Low Current Leakage
- Metalurgically Bonded Construction
- Low Cost

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 50°C/W Junction To Lead

Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RL101	---	50V	35V	50V
RL102	---	100V	70V	100V
RL103	---	200V	140V	200V
RL104	---	400V	280V	400V
RL105	---	600V	420V	600V
RL106	---	800V	560V	800V
RL107	---	1000V	700V	1000V

A-405



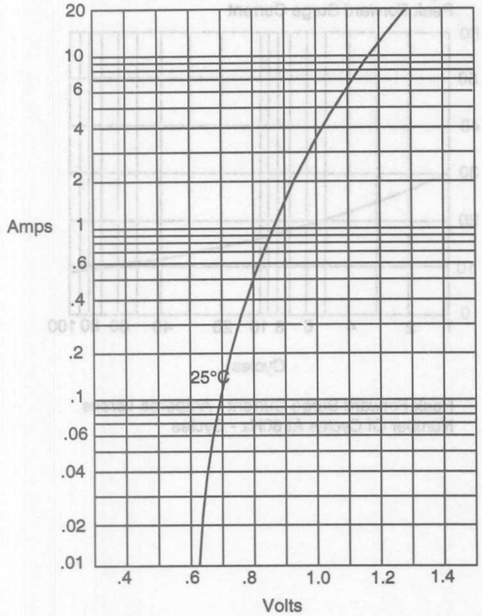
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0µA 50µA	$T_J = 25°C$ $T_J = 125°C$
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

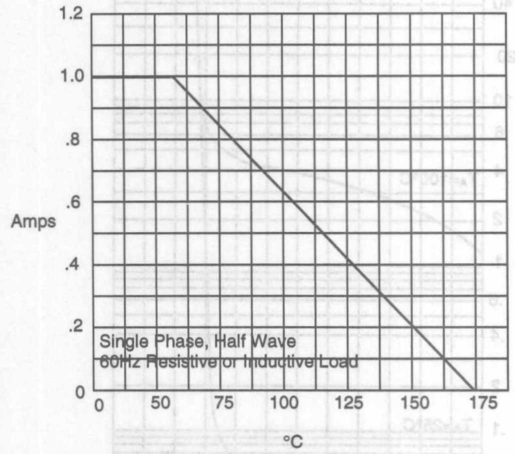
*Pulse test: Pulse width 300 µsec, Duty cycle 2%

Figure 1
Typical Forward Characteristics



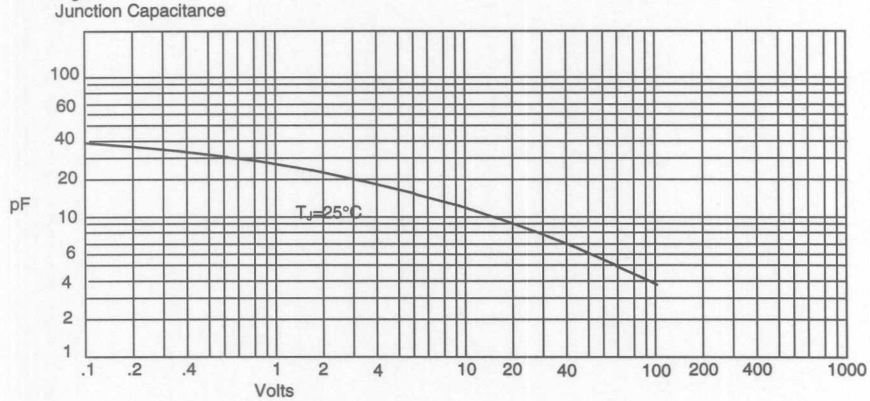
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



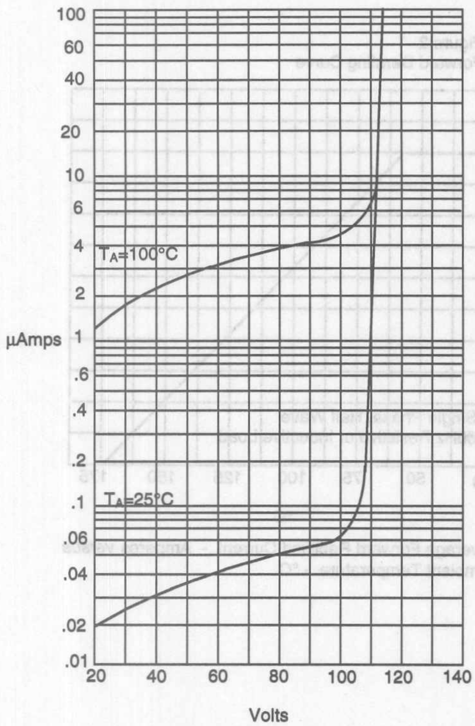
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



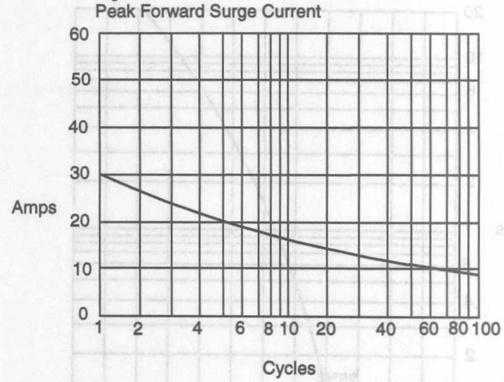
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA
Microsemi
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Chatsworth, Ca 91311
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Fax: (818) 701-4939

RL201 THRU RL207

2 Amp Silicon Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Typical Thermal Resistance ($R_{\theta JA}$) 40°C/W

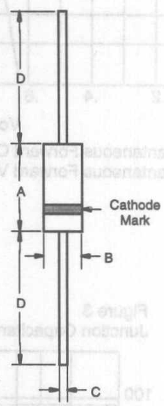
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RL201	---	50V	35V	50V
RL202	---	100V	70V	100V
RL203	---	200V	40V	200V
RL204	---	400V	280V	400V
RL205	---	600V	420V	600V
RL206	---	800V	560V	800V
RL207	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2 A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	70A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	$I_{FM} = 2.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	20pF	Measured at 1.0MHz, V_R=4.0V

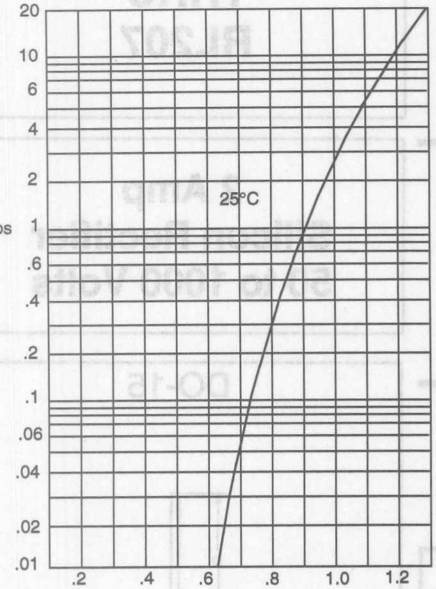
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

DO-15



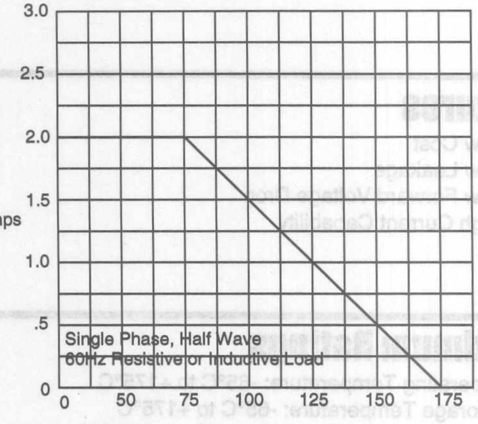
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



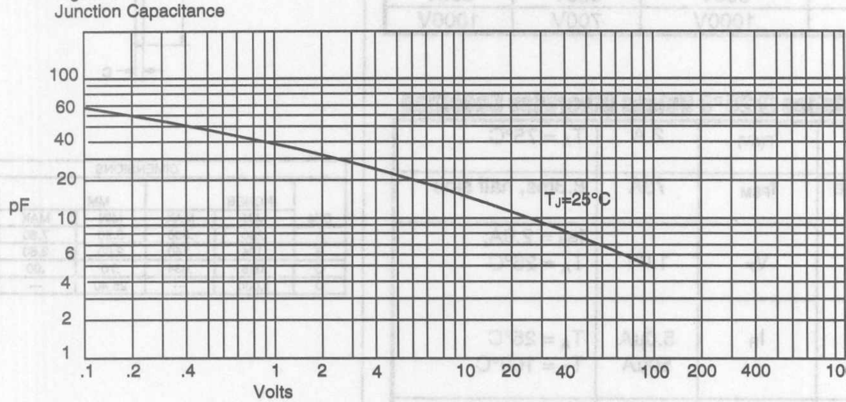
Instantaneous Forward Current - MicroAmperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



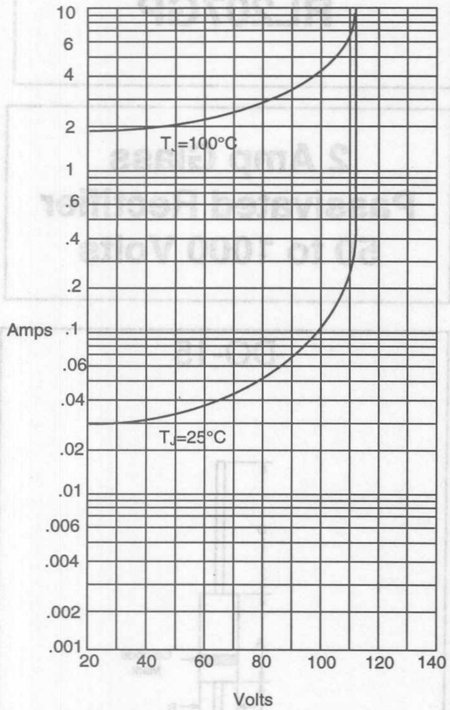
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



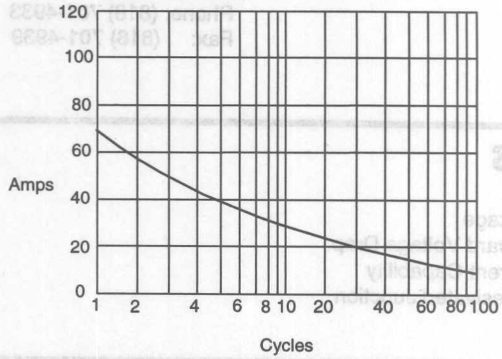
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Current - Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA
Microsemi
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RL201GP THRU RL207GP

2 Amp Glass Passivated Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Glass Passivated Junction

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Typical Thermal Resistance ($R_{\theta JA}$) 50°C/W

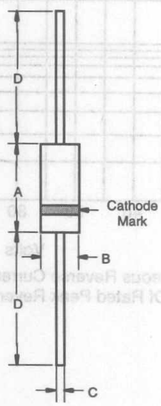
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RL201GP	---	50V	35V	50V
RL202GP	---	100V	70V	100V
RL203GP	---	200V	40V	200V
RL204GP	---	400V	280V	400V
RL205GP	---	600V	420V	600V
RL206GP	---	800V	560V	800V
RL207GP	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2 A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	60A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	$I_{FM} = 2.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	20pF	Measured at 1.0MHz, V_R=4.0V

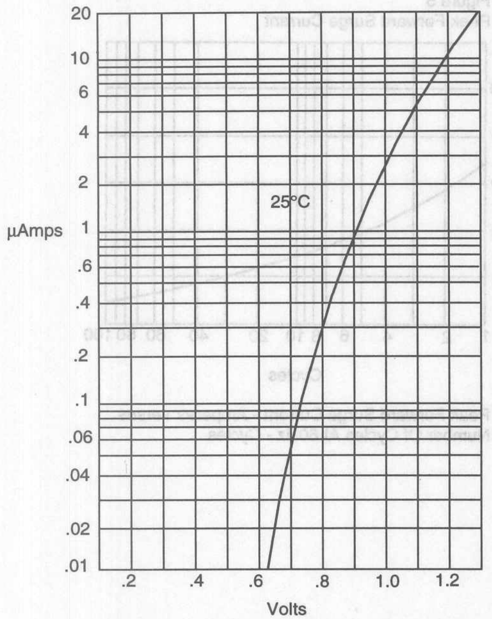
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

DO-15



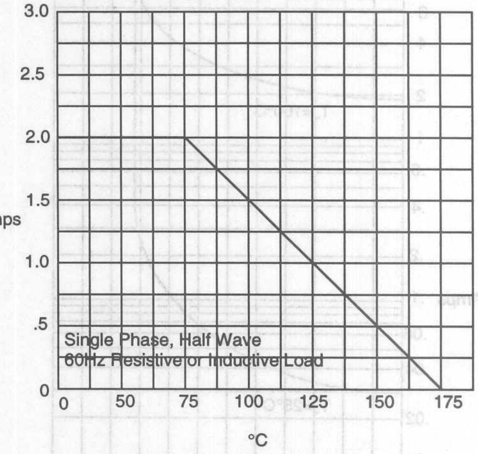
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



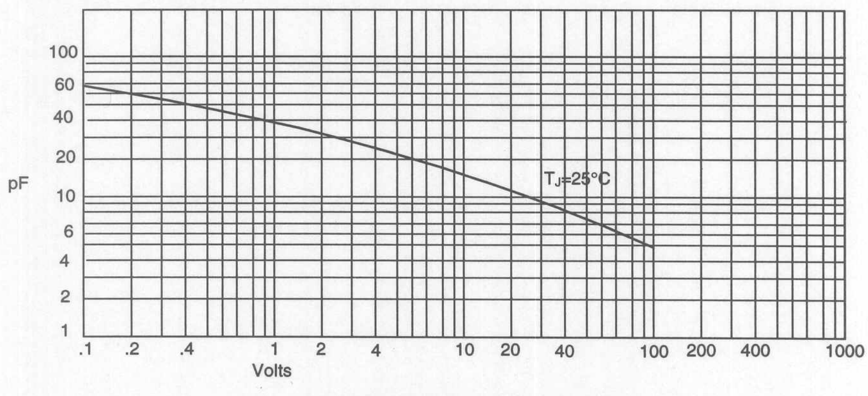
Instantaneous Forward Current - MicroAmperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



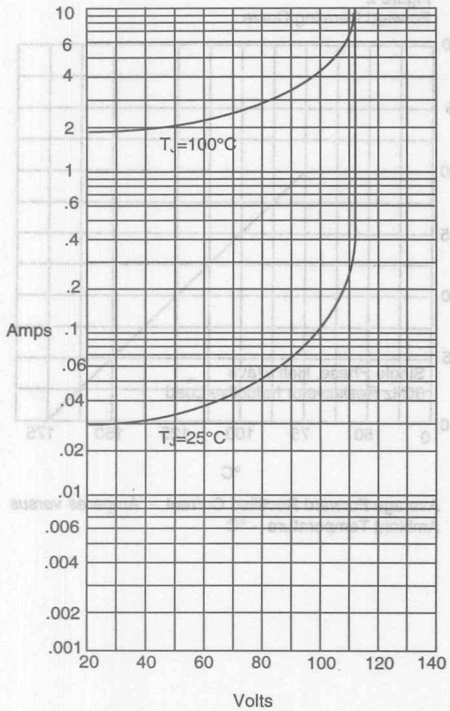
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



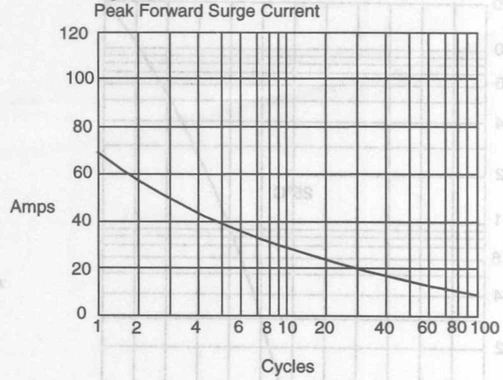
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Current - Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Chatsworth, CA
Microsemi
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Chatsworth, Ca 91311
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RL251 THRU RL257

2.5 Amp Silicon Rectifier 50 to 1000 Volts

Features

- Low Cost
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Typical Thermal Resistance ($R_{\theta JA}$) 35°C/W

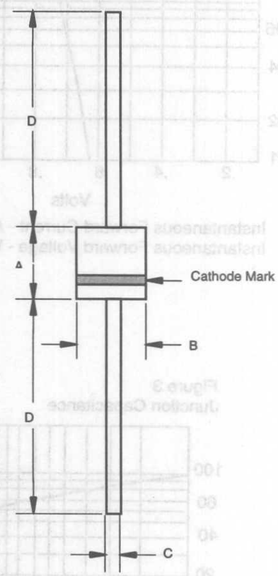
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RL251	---	50V	35V	50V
RL252	---	100V	70V	100V
RL253	---	200V	40V	200V
RL254	---	400V	280V	400V
RL255	---	600V	420V	600V
RL256	---	800V	560V	800V
RL257	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2.5 A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.0V	$I_{FM} = 2.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0μA 50μA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	35pF	Measured at 1.0MHz, V_R=4.0V

*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

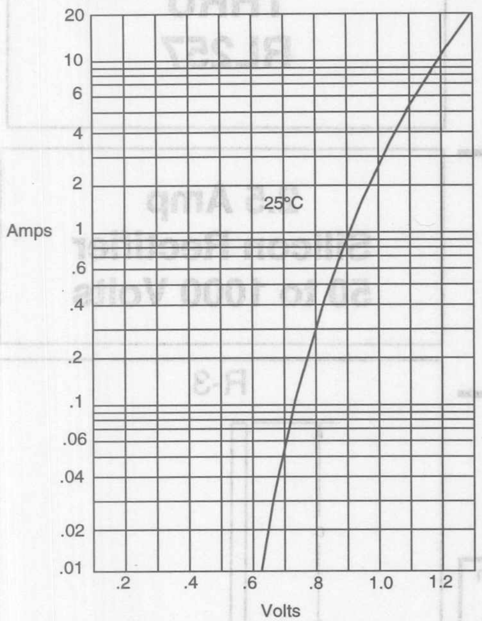
R-3



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.160	---	4.10	
B	---	.160	---	4.10	
C	.040	.042	1.01	1.07	
D	1.000	---	25.40	---	

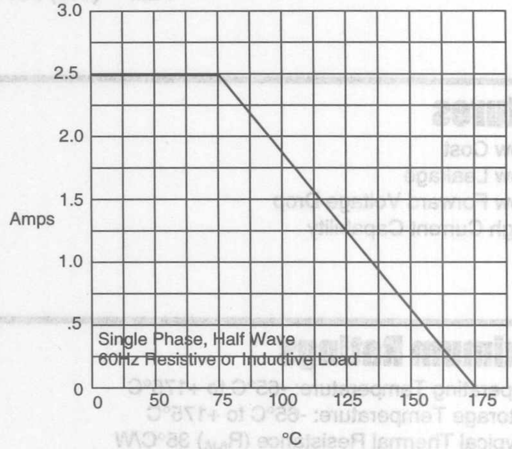
RL251 thru RL257

Figure 1
Typical Forward Characteristics



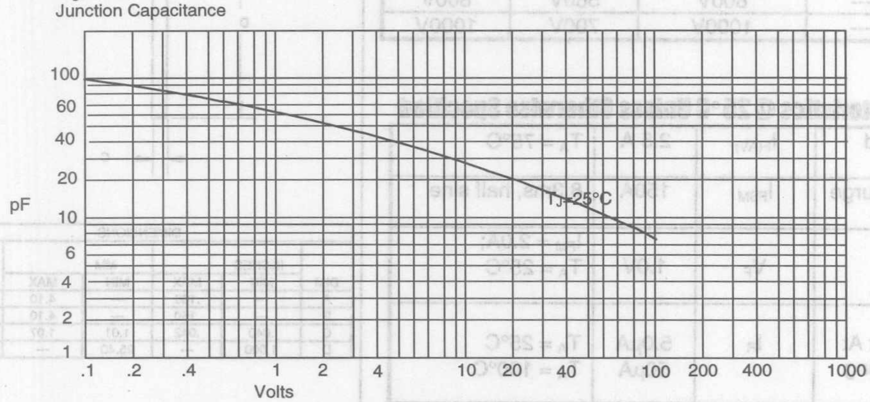
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



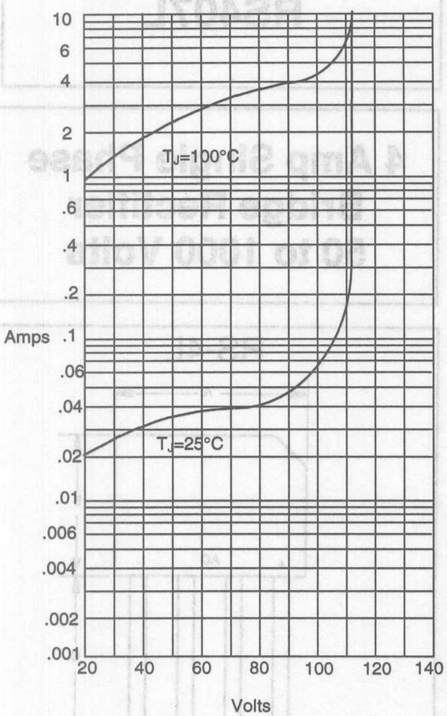
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



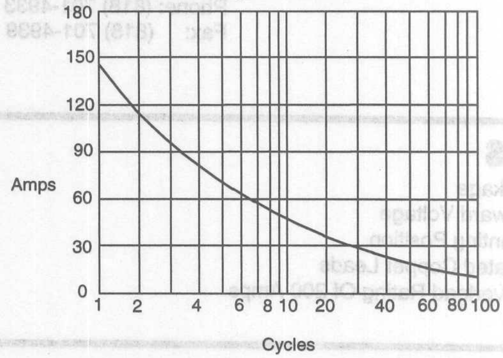
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Current - Amps *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi
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Chatsworth, Ca 91311
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Fax: (818) 701-4939

RS401L THRU RS407L

4 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Low Leakage
- Low Forward Voltage
- Any Mounting Position
- Silver Plated Copper Leads
- Surge Overload Rating Of 200 Amps

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

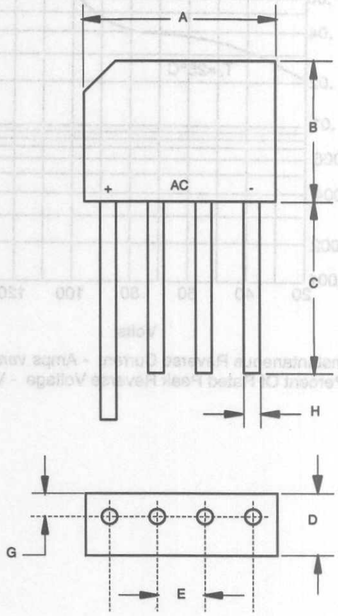
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RS401L	RS401L	50V	35V	50V
RS402L	RS402L	100V	70V	100V
RS403L	RS403L	200V	140V	200V
RS404L	RS404L	400V	280V	400V
RS405L	RS405L	600V	420V	600V
RS406L	RS406L	800V	560V	800V
RS407L	RS407L	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	4.0A	$T_J = 50°C$
Peak Forward Surge Current	I_{FSM}	200A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.0V	$I_{FM} = 4.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 1.0mA	$T_J = 25°C$ $T_J = 100°C$

*Pulse test: Pulse width 300 µsec, Duty cycle 1%

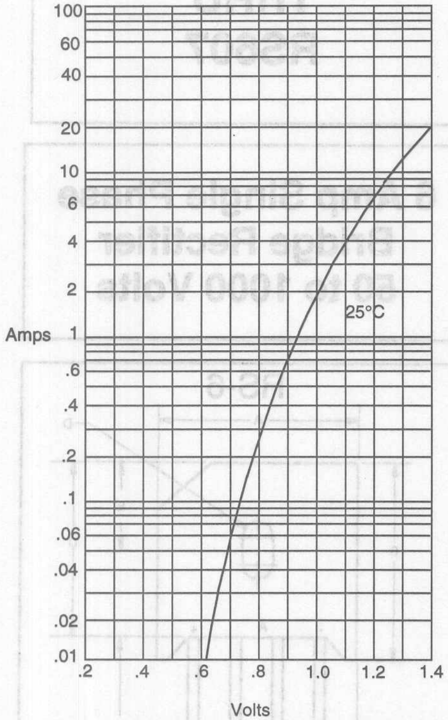
RS-4L



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.730	.770	18.50	19.50	
B	.608	.632	15.40	16.00	
C	.750	---	19.00	---	
D	.245	.257	6.20	6.50	
E	.182	.221	4.60	5.60	3 PL
G	.059	.079	1.50	2.00	
H	.051	---	1.30	---	TYP

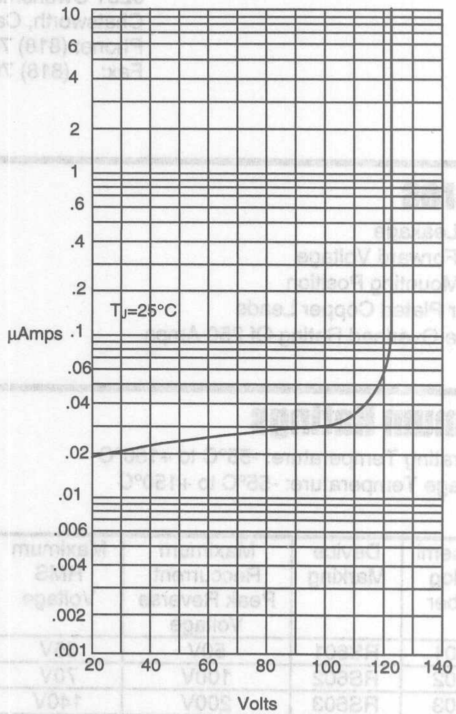
RS401L thru RS407L

Figure 1
Typical Forward Characteristics



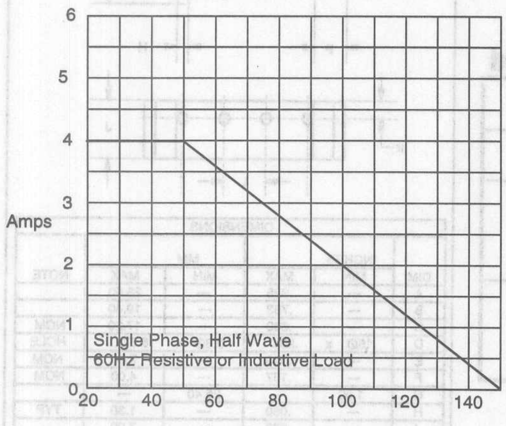
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



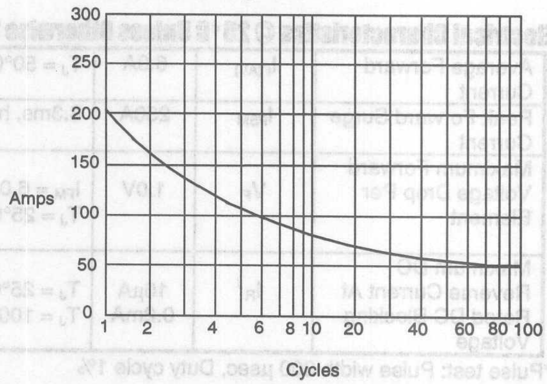
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi
Chatsworth, CA
Progress Powered by Technology
9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

RS601 THRU RS607

6 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Low Leakage
- Low Forward Voltage
- Any Mounting Position
- Silver Plated Copper Leads
- Surge Overload Rating Of 250 Amps

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

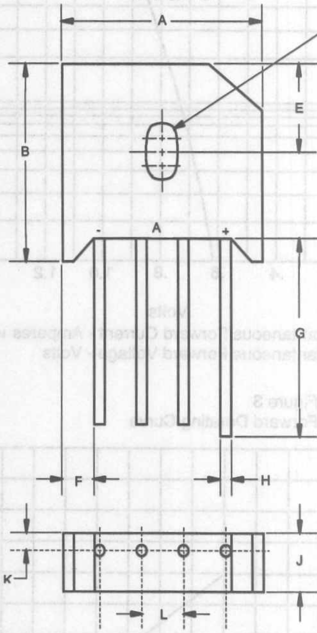
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
RS601	RS601	50V	35V	50V
RS602	RS602	100V	70V	100V
RS603	RS603	200V	140V	200V
RS604	RS604	400V	280V	400V
RS605	RS605	600V	420V	600V
RS606	RS606	800V	560V	800V
RS607	RS607	1000v	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	6.0A	$T_J = 50°C$
Peak Forward Surge Current	I_{FSM}	250A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.0V	$I_{FM} = 6.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.2mA	$T_J = 25°C$ $T_J = 100°C$

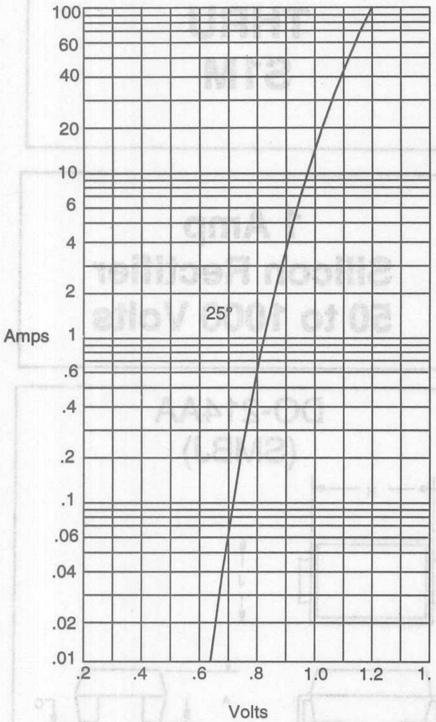
*Pulse test: Pulse width 300 μsec, Duty cycle 1%

RS-6



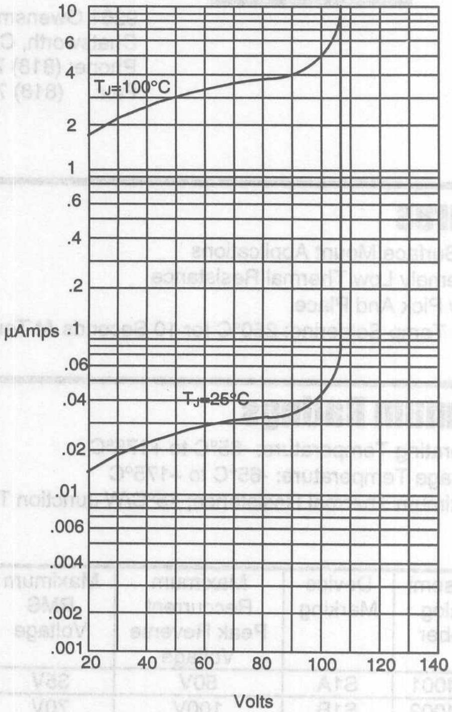
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.925	---	23.50	
B	---	.763	---	19.40	
C	---	.680	---	17.20	NOM
D	.15Ø x	.23L	3.8Ø x	5.57L	HOLE
E	---	.300	---	7.50	NOM
F	---	.157	---	4.00	NOM
G	1.00	---	25.40	---	
H	---	.050	---	1.30	TYP
J	---	.280	---	7.00	
K	---	.075	---	1.90	NOM
L	---	.200	---	5.10	3PL

Figure 1
Typical Forward Characteristics



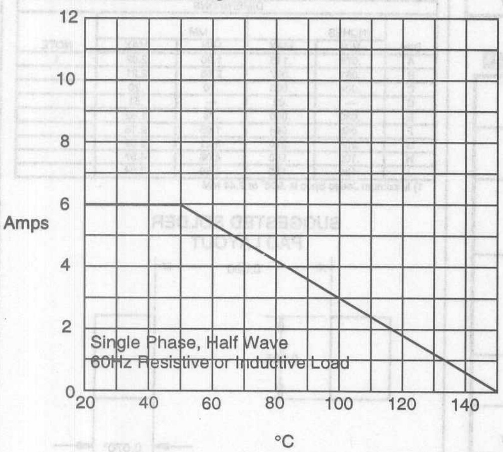
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



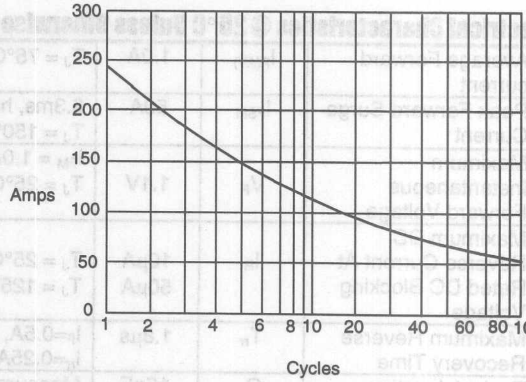
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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THRU
S1M

1 Amp Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

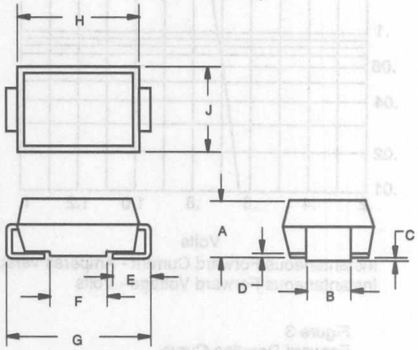
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SMB4001	S1A	50V	35V	50V
SMB4002	S1B	100V	70V	100V
SMB4003	S1D	200V	140V	200V
SMB4004	S1G	400V	280V	400V
SMB4005	S1J	600V	420V	600V
SMB4006	S1K	800V	560V	800V
SMB4007	S1M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	1.0A	T_J = 75°C
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine, T_J = 150°C
Maximum Instantaneous Forward Voltage	V_F	1.1V	I_{FM} = 1.0A; T_J = 25°C*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 50µA	T_J = 25°C T_J = 125°C
Maximum Reverse Recovery Time	T_{rr}	1.8µs	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	15pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

DO-214AA (SMBJ)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.075	.115	1.90	2.92	1
B	.081	.087	2.06	2.21	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

1) Maximum Jedec Spec is .096" or 2.44 MM

SUGGESTED SOLDER PAD LAYOUT

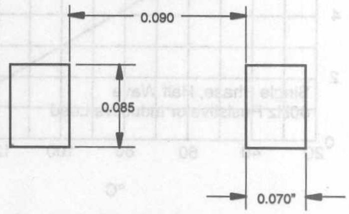
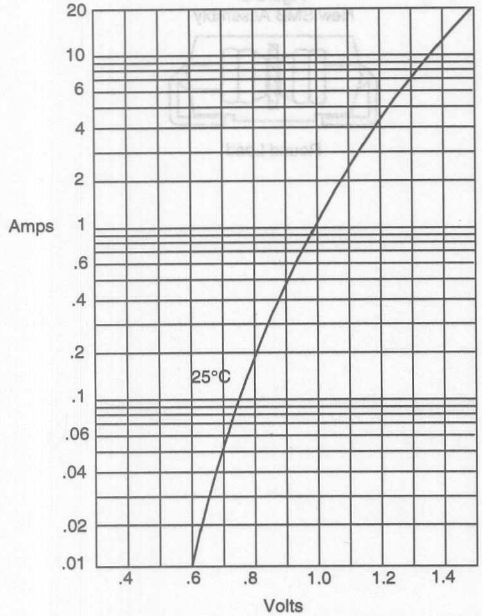
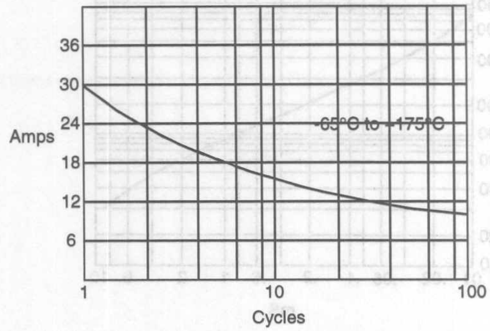


Figure 1
Typical Forward Characteristics



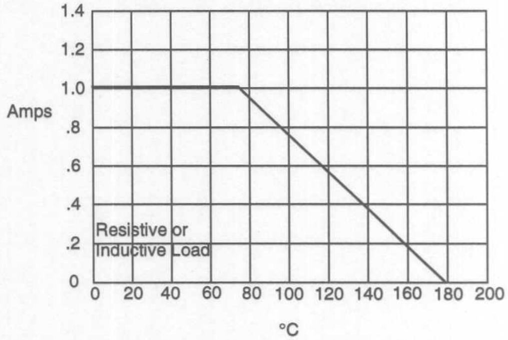
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 3
Maximum Overload Surge Current



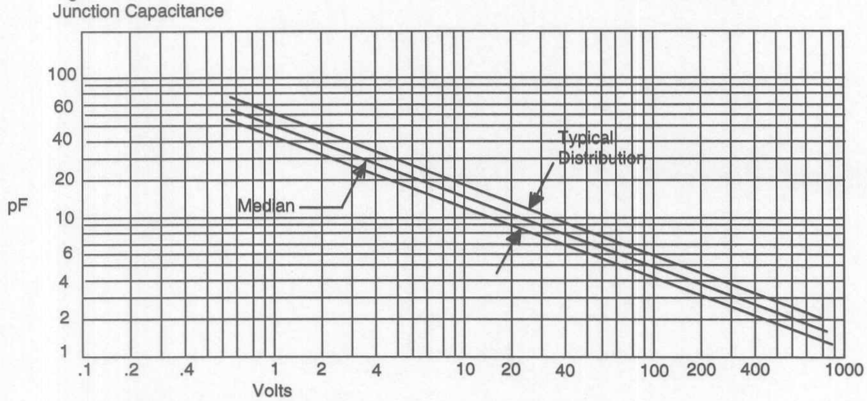
Peak Forward Current - Amperes *versus*
Number of Cycles at 60Hz

Figure 4
Forward Derating Curve



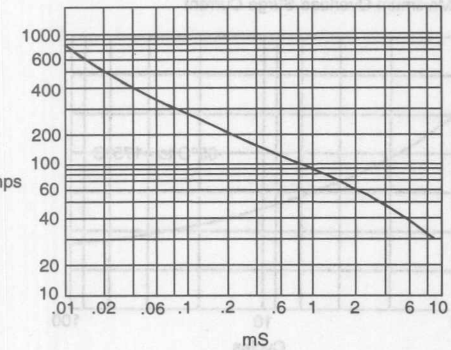
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 2
Junction Capacitance



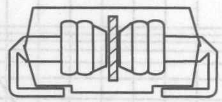
Junction Capacitance - pF *versus*
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Pulse Duration - Milliseconds (mS)

Figure 6
New SMB Assembly



Microsemi
Chatsworth, CA
Progress Powered by Technology

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Chatsworth, Ca 91311
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S2A THRU S2M

2 Amp Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

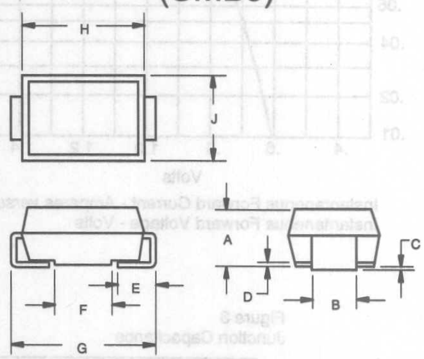
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S2A	S2A	50V	35V	50V
S2B	S2B	100V	70V	100V
S2D	S2D	200V	140V	200V
S2G	S2G	400V	280V	400V
S2J	S2J	600V	420V	600V
S2K	S2K	800V	560V	800V
S2M	S2M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward current	$I_{F(AV)}$	2.0A	$T_J = 75°C$
Peak Forward Surge Current	I_{FSM}	70A	8.3ms, half sine, $T_J = 150°C$
Maximum Instantaneous Forward Voltage	V_F	1.15V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 50µA	$T_J = 25°C$ $T_J = 125°C$
Maximum Reverse Recovery Time	T_{rr}	2.0µs	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	30pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

DO-214AA (SMBJ)



DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.075	.115	1.90	2.92	1
B	.081	.087	2.06	2.21	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

DIMENSIONS

1) Maximum Jedec Spec is .096" or 2.44 MM

SUGGESTED SOLDER PAD LAYOUT

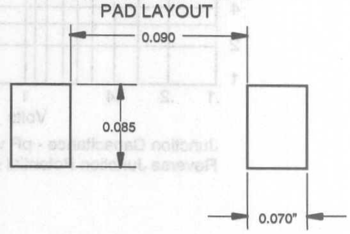
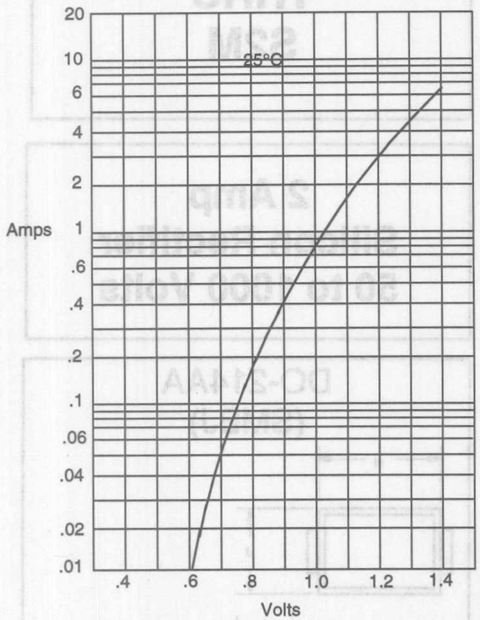
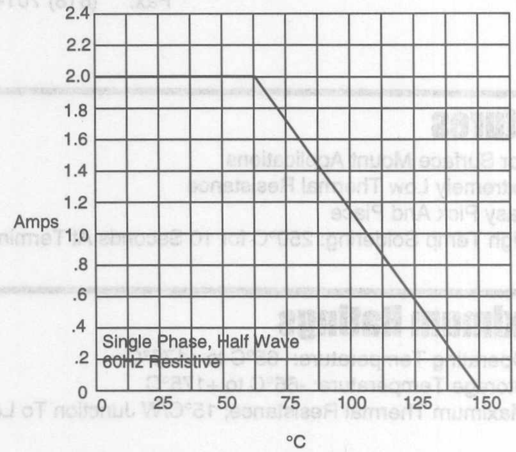


Figure 1
Typical Forward Characteristics



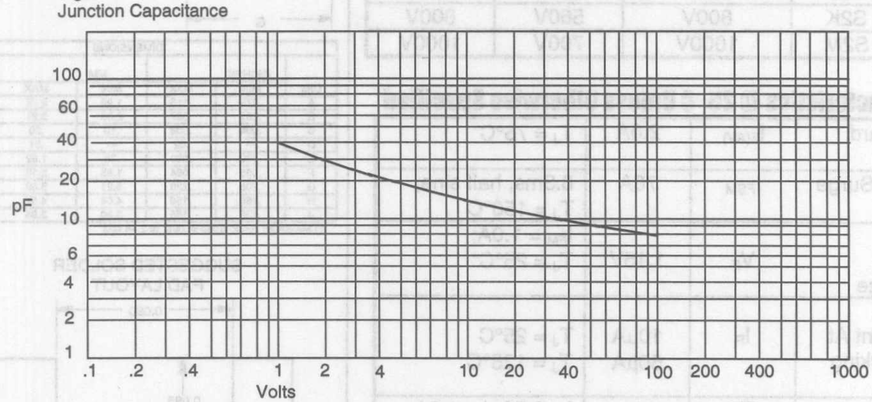
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



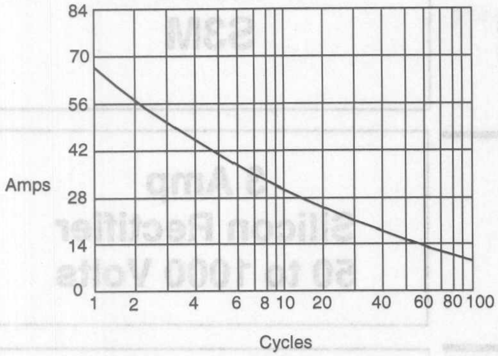
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



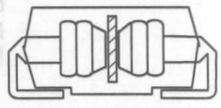
Junction Capacitance - pF *versus*
Reverse Junction Potential (Applied V + 0.7 Volts) - Volts

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

Figure 5
New SMB Assembly



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S3A THRU S3M

3 Amp Silicon Rectifier 50 to 1000 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals\
- High Current Capability

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 10°C/W Junction To Lead

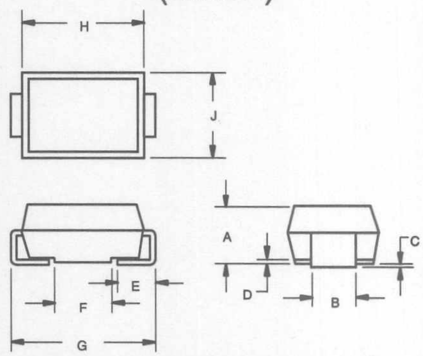
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
S3A	S3A	50V	35V	50V
S3B	S3B	100V	70V	100V
S3D	S3D	200V	140V	200V
S3G	S3G	400V	280V	400V
S3J	S3J	600V	420V	600V
S3K	S3K	800V	560V	800V
S3M	S3M	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	$T_J = 120°C$
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.20V	$I_{FM} = 3.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 250μA	$T_J = 25°C$ $T_J = 125°C$
Maximum Reverse Recovery Time	T_{rr}	2.5μs	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	60pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 200 μsec, Duty cycle 2%

DO-214AB (SMCJ)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.075	.095	1.90	2.41	
B	.115	.121	2.92	3.07	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F					
G	.305	.320	7.75	8.13	
H	.260	.280	6.60	7.11	
J	.220	.245	5.59	6.22	

SUGGESTED SOLDER PAD LAYOUT

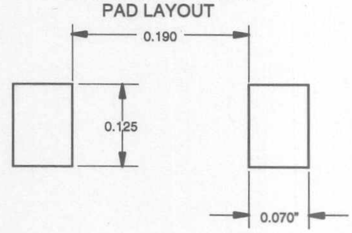
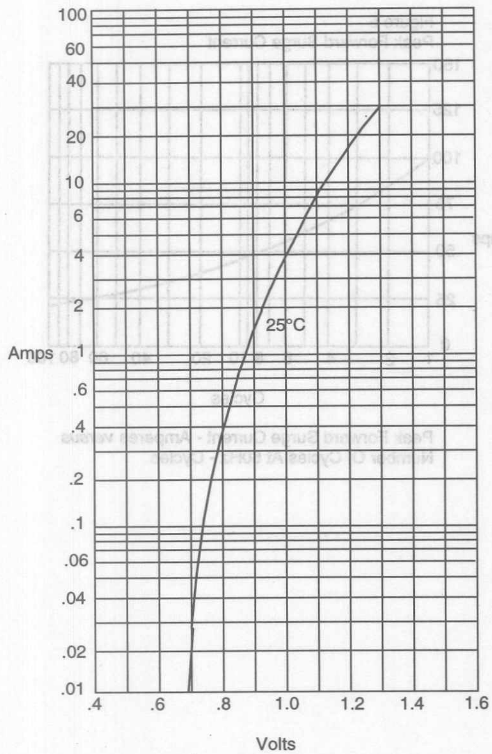
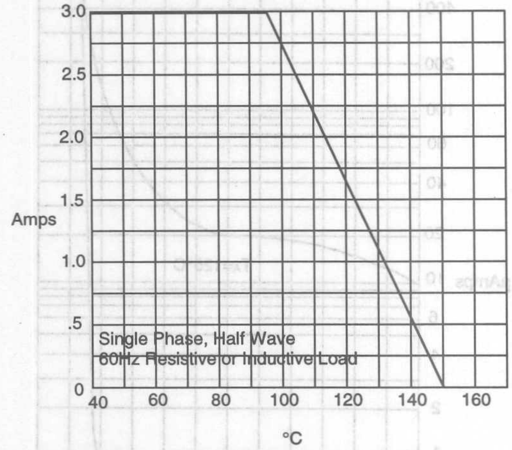


Figure 1
Typical Forward Characteristics



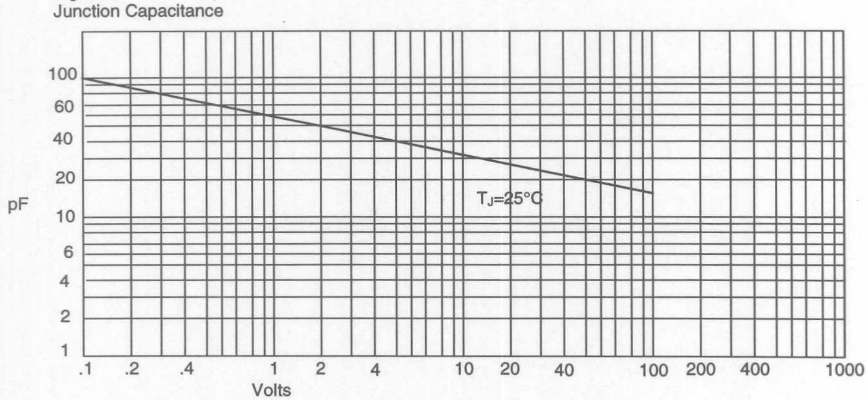
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



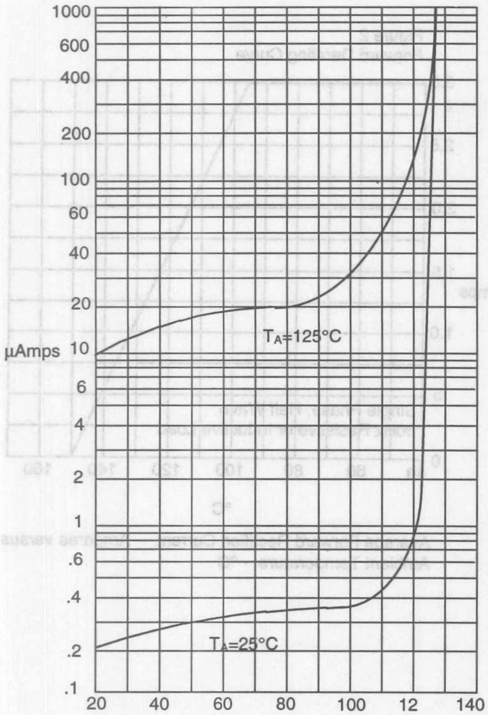
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



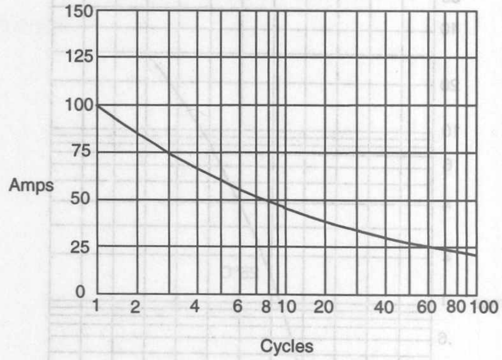
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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SD820 thru SD8100

8 Amp Schottky Barrier Rectifier 20 - 100 Volts

Features

- Low Switching Noise
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

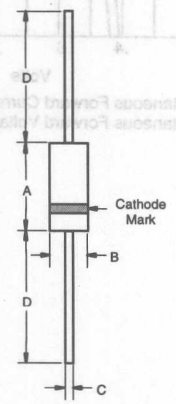
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SD820	SD820	20V	14V	20V
SD830	SD830	30V	21V	30V
SD840	SD840	40V	28V	40V
SD850	SD850	50V	35V	50V
SD860	SD860	60V	42V	60V
SD880	SD880	80V	56V	80V
SD8100	SD8100	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	8.0A	$T_A = 90°C$
Peak Forward Surge Current	I_{FSM}	175A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SD820-SD860 SD880-SD8100	V_F	.62V .75V	$I_{FM} = 8.0A$; $T_A = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	0.5mA 50mA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance	C_J	550pF	Measured at 1.0MHz, V_R=4.0V

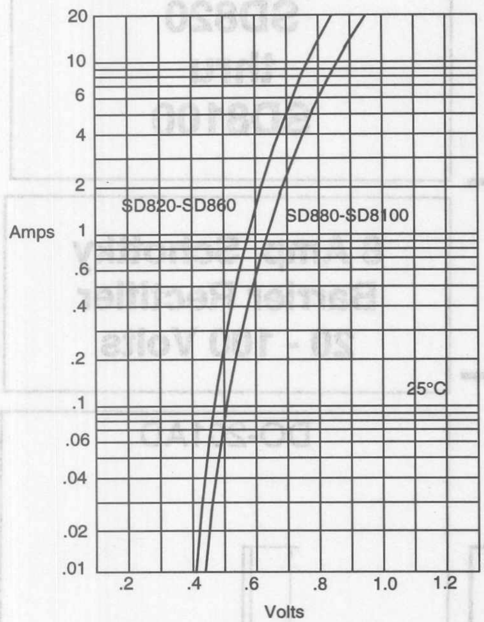
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

DO-201AD



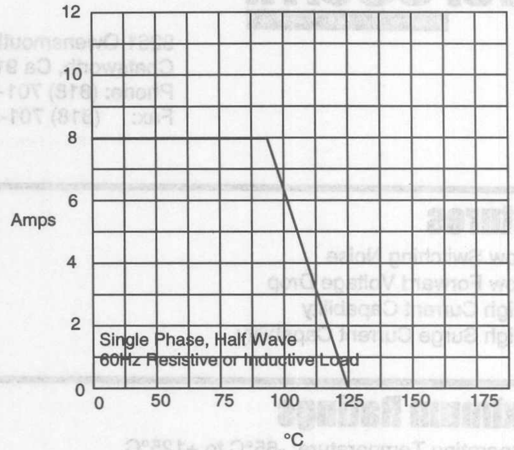
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



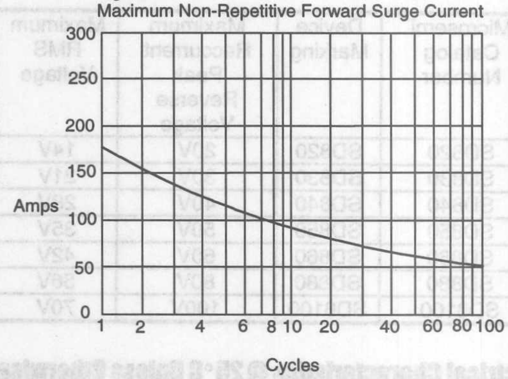
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



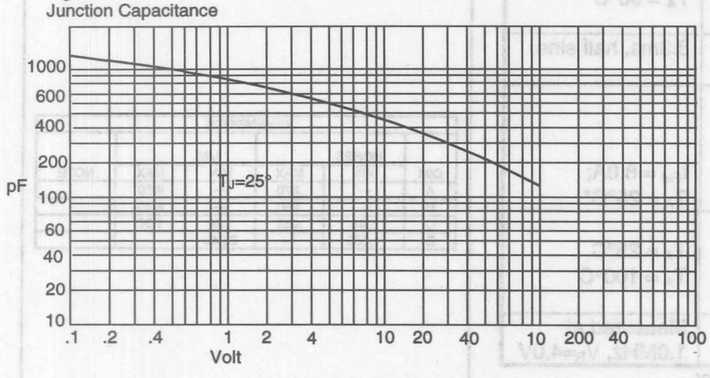
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure3
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 4
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

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SDB101 THRU SDB107

1 Amp Single Phase Glass Passivated Bridge Rectifier 50 to 1000 Volts

Features

- Surface Mount Package
- Glass Passivated Diode Construction
- Moisture Resistant Epoxy Case
- High Surge Current Capability

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

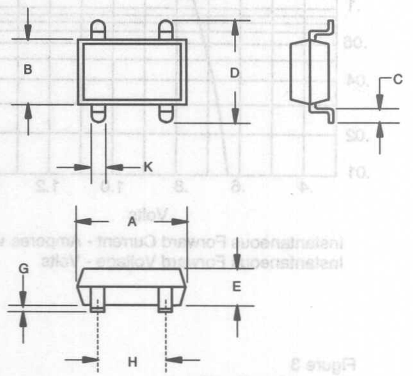
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SDB101	---	50V	35V	50V
SDB102	---	100V	70V	100V
SDB103	---	200V	140V	200V
SDB104	---	400V	280V	400V
SDB105	---	600V	420V	600V
SDB106	---	800V	560V	800V
SDB107	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 40°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	V_F	1.1V	$I_{FM} = 1.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 0.5mA	$T_A = 25°C$ $T_A = 125°C$
Maximum Reverse Recovery Time	T_{rr}	36ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance	C_J	25pF	Measured at 1.0MHz, V_R=4.0V

*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

SDB-1



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.355	.365	9.00	9.30	
B	.245	.255	6.20	6.60	
C	.040	.060	1.02	1.52	
D	---	.441	---	11.20	
E	.115	.135	2.90	3.40	
G	---	.012	---	0.30	
H	.195	.205	5.00	5.20	
K	.040	.047	1.20	1.02	TYP

Suggested Solder Pad Layout

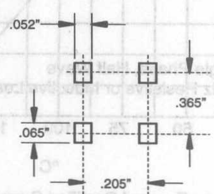
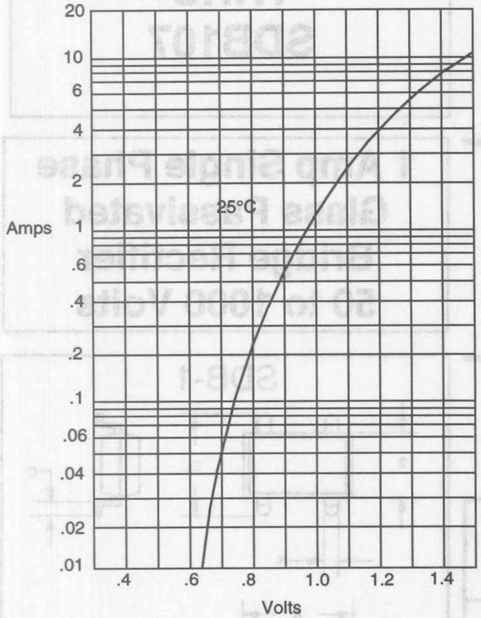
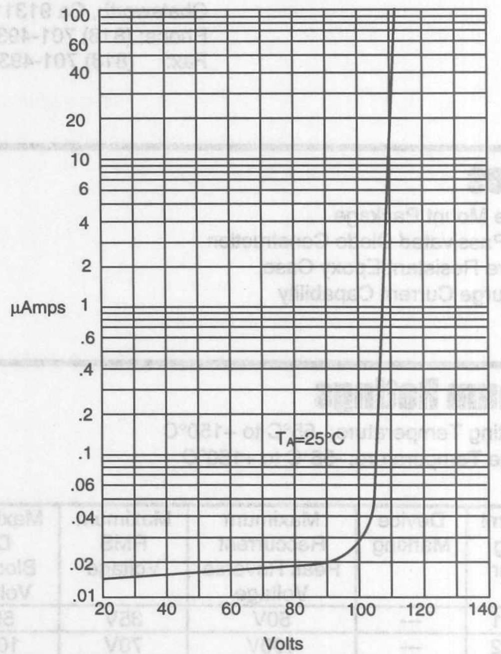


Figure 1
Typical Forward Characteristics



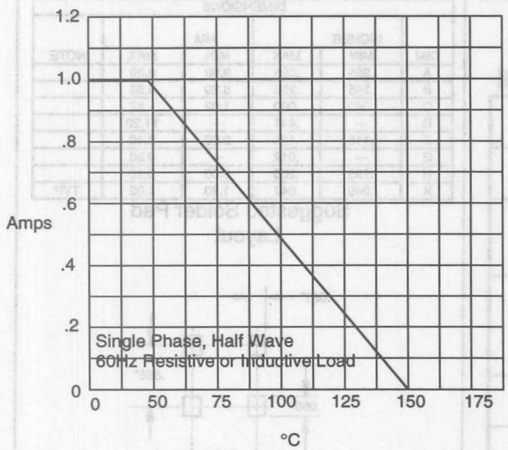
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



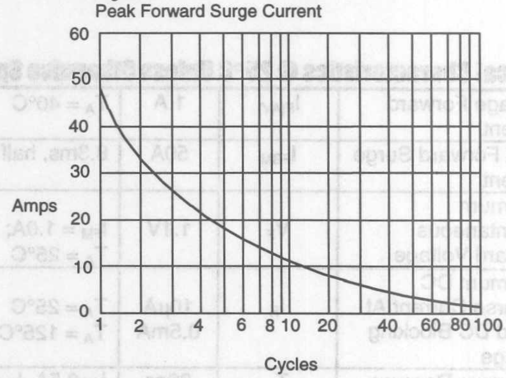
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi
Chatsworth, CA
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

SF11 THRU SF18

1 Amp Glass Passivated Super Fast Recovery Rectifier 50 to 600 Volts

Features

- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Super Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

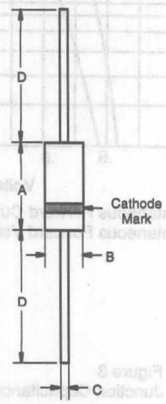
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF11	SF11	50V	35V	50V
SF12	SF12	100V	70V	100V
SF13	SF13	150V	105V	150V
SF14	SF14	200V	140V	200V
SF15	SF15	300V	210V	300V
SF16	SF16	400V	280V	400V
SF18	SF18	600V	420V	600V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SF11-15 SF16-18	V_F	.95V 1.25V	$I_{FM} = 1.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5µA 50µA	$T_A = 25°C$ $T_A = 150°C$
Maximum Reverse Recovery Time	T_{rr}	35ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance SF11-15 SF16-18	C_J	15pF 10pF	Measured at 1.0MHz, V_R=4.0V

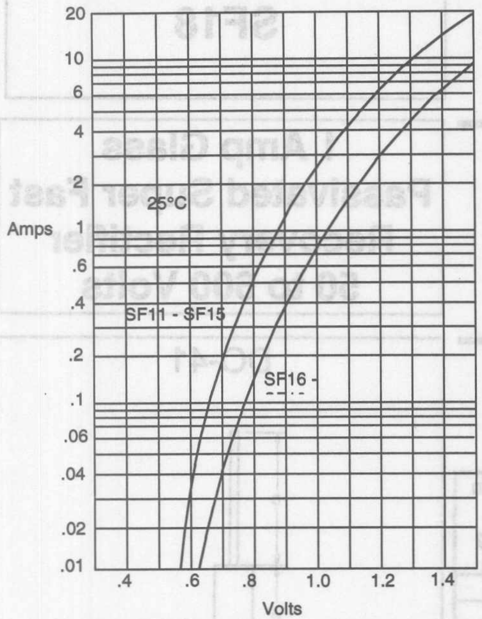
*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

DO-41



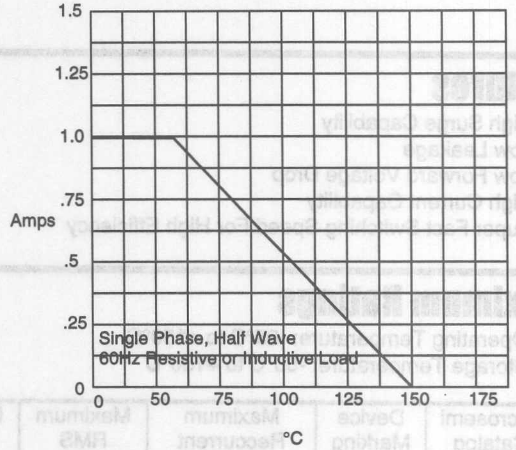
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



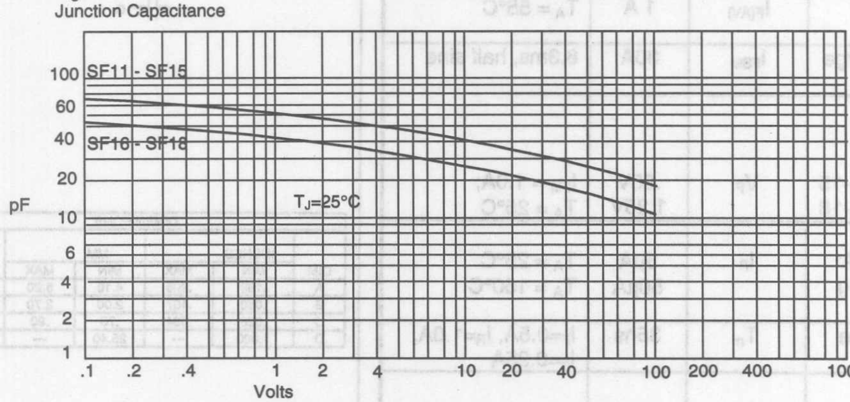
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



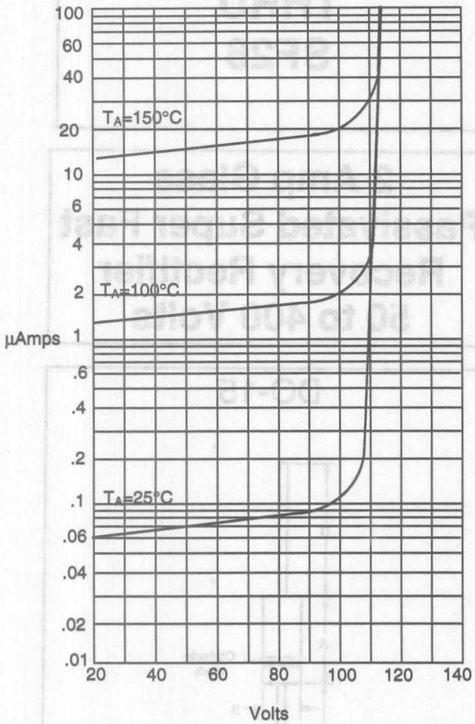
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



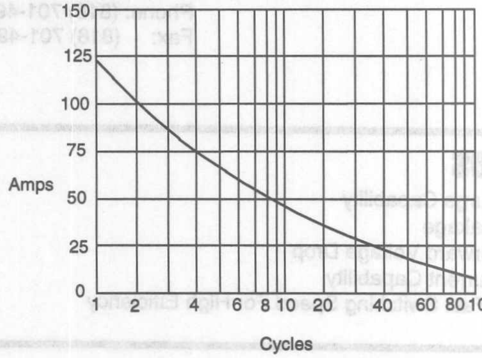
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



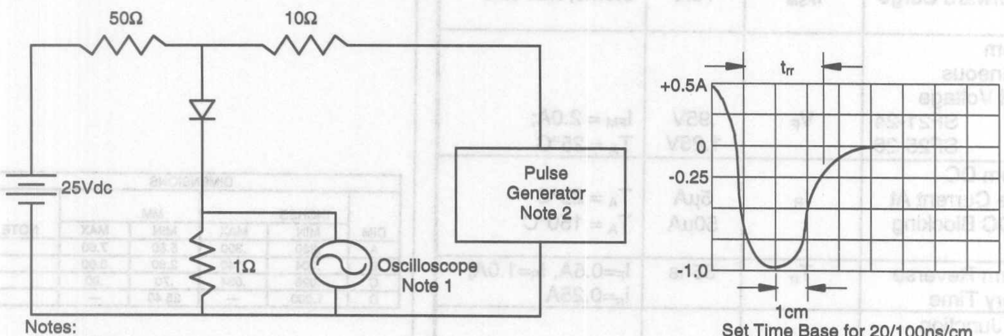
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

Microsemi
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SF21 THRU SF26

2 Amp Glass Passivated Super Fast Recovery Rectifier 50 to 400 Volts

Features

- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Super Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

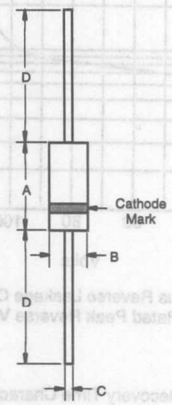
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF21	---	50V	35V	50V
SF22	---	100V	70V	100V
SF23	---	150V	105V	150V
SF24	---	200V	140V	200V
SF25	---	300V	210V	300V
SF26	---	400V	280V	400V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	2 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	75A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SF21-24 SF25-26	V_F	.95V 1.25V	$I_{FM} = 2.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5μA 50μA	$T_A = 25°C$ $T_A = 150°C$
Maximum Reverse Recovery Time	T_{rr}	35ns	$I_F=0.5A$, $I_R=1.0A$, $I_{rr}=0.25A$
Typical Junction Capacitance SF21-24 SF25-26	C_J	30pF 20pF	Measured at 1.0MHz, $V_R=4.0V$

*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

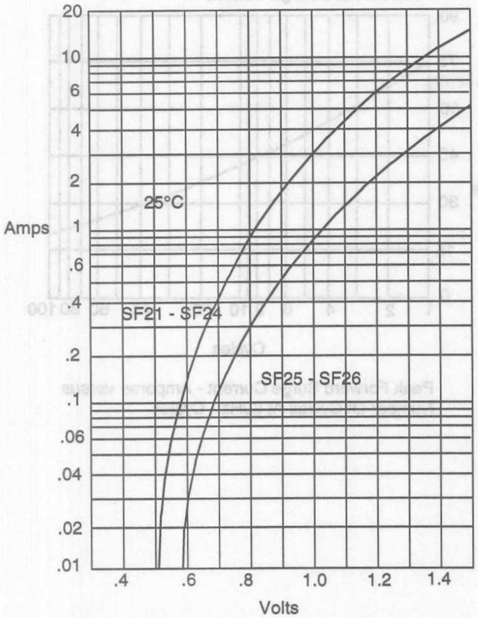
DO-15



DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.230	.300	5.80	7.60	
B	.104	.140	2.60	3.60	
C	.026	.034	.70	.90	
D	1.000	---	25.40	---	

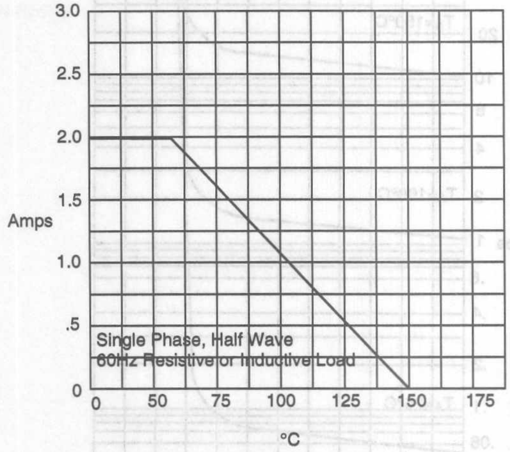
SF21 thru SF26

Figure 1
Typical Forward Characteristics



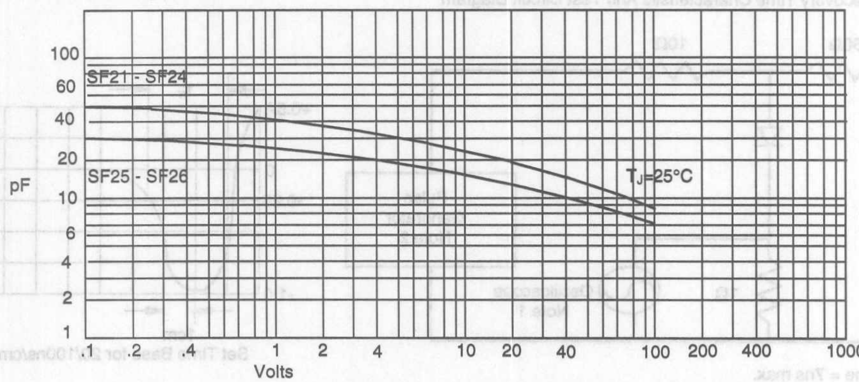
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

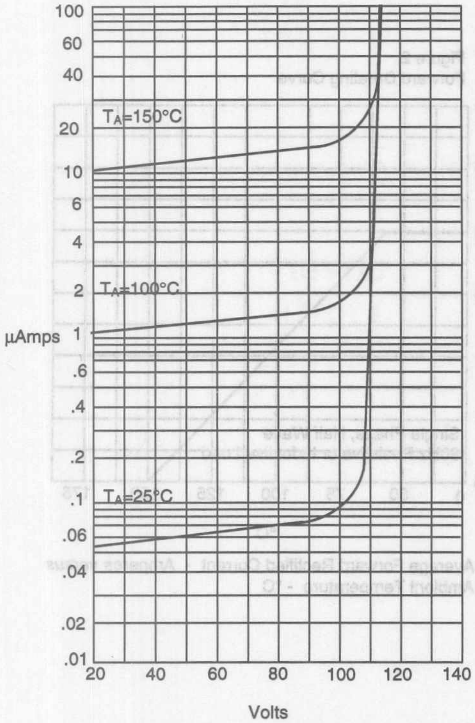
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

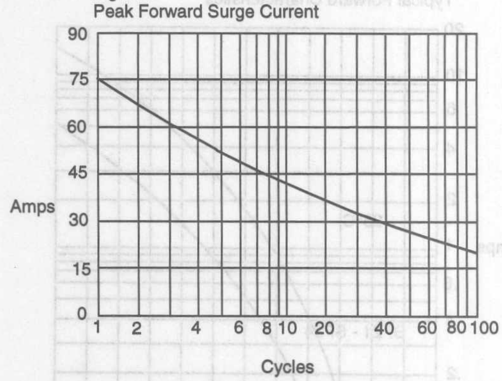
SF21 thru SF26

Figure 4
Typical Reverse Characteristics



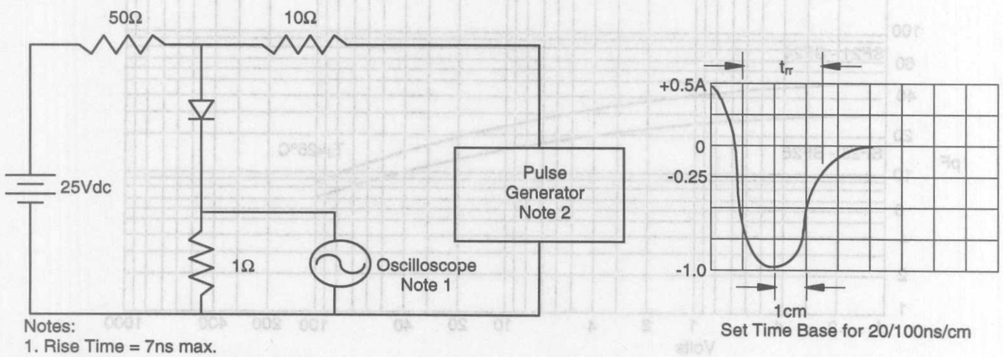
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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SF31 THRU SF310

3 Amp Glass Passivated Super Fast Recovery Rectifier 50 to 1000 Volts

Features

- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- Super Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C

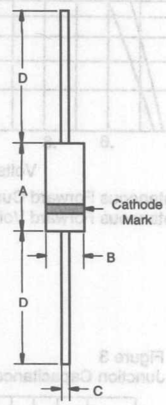
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SF31	---	50V	35V	50V
SF32	---	100V	70V	100V
SF33	---	150V	105V	150V
SF34	---	200V	140V	200V
SF35	---	300V	210V	300V
SF36	---	400V	280V	400V
SF37	---	600V	420V	600V
SF38	---	800V	560V	800V
SF310	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	125A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SF31-35 SF36-310	V_F	.90V 1.25V	$I_{FM} = 3.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 50μA	$T_A = 25°C$ $T_A = 55°C$
Maximum Reverse Recovery Time	T_{rr}	36ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance SF31-35 SF36-3100	C_J	50pF 30pF	Measured at 1.0MHz, V_R=4.0V

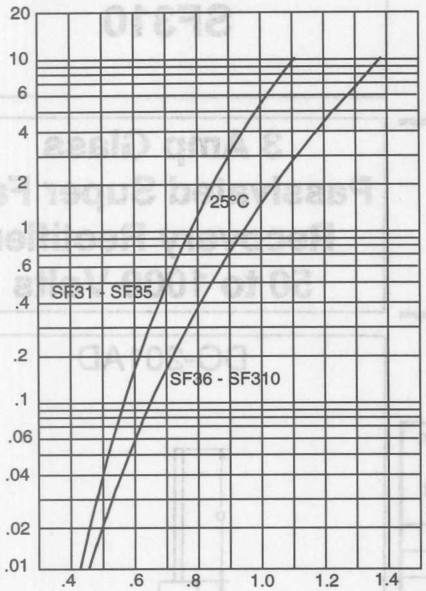
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

DO-201AD



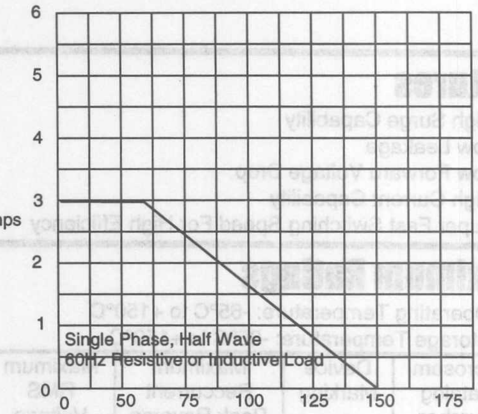
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



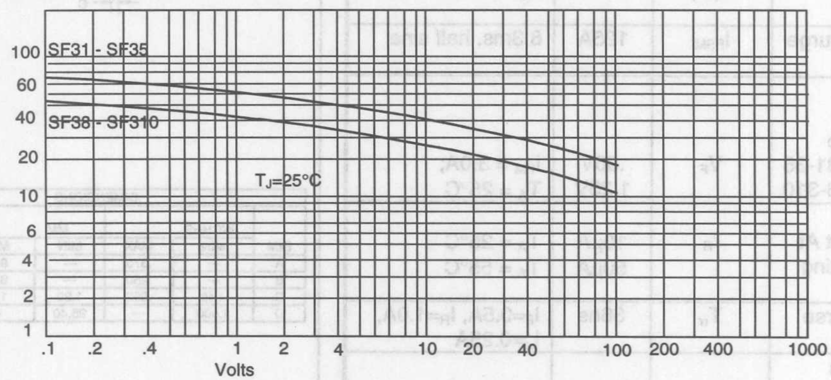
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



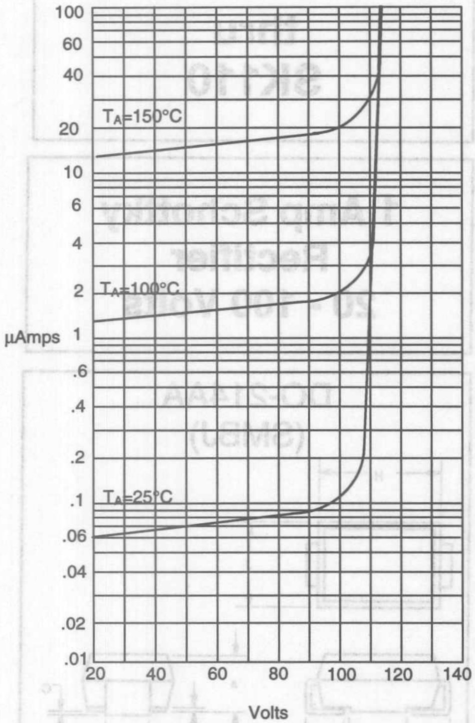
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



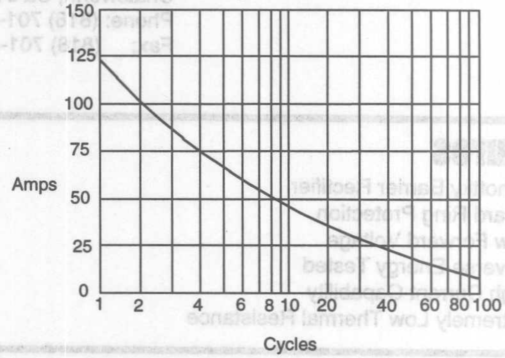
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



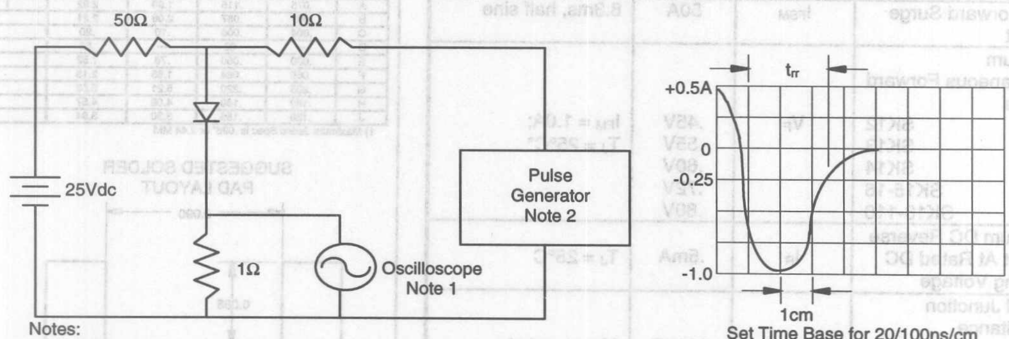
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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Chatsworth, Ca 91311
Phone: (818) 701-4933
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SK12 thru SK110

1 Amp Schottky Rectifier 20 - 100 Volts

Features

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Reverse Energy Tested
- High Current Capability
- Extremely Low Thermal Resistance

Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

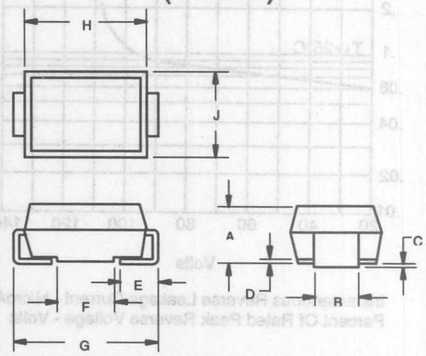
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SMB5817	SK12	20V	14V	20V
SMB5818	SK13	30V	21V	30V
SMB5819	SK14	40V	28V	40V
SMBSR105	SK15	50V	35V	50V
SMBSR106	SK16	60V	42V	60V
SMBSR108	SK18	80V	56V	80V
SMBSR1010	SK110	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_J = 90°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SK12 SK13 SK14 SK15-16 SK18-110	V_F	.45V .55V .60V .72V .80V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	.5mA	$T_J = 25°C$
Typical Junction Capacitance SK12 SK13-SK110	C_J	230pF 50pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

DO-214AA (SMBJ)



DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.075	.115	1.90	2.92	1
B	.081	.087	2.06	2.21	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

1) Maximum Jedec Spec is .096" or 2.44 MM

SUGGESTED SOLDER PAD LAYOUT

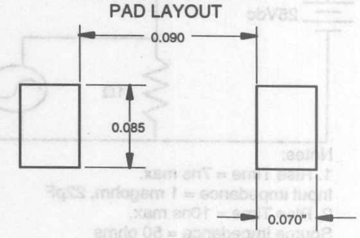
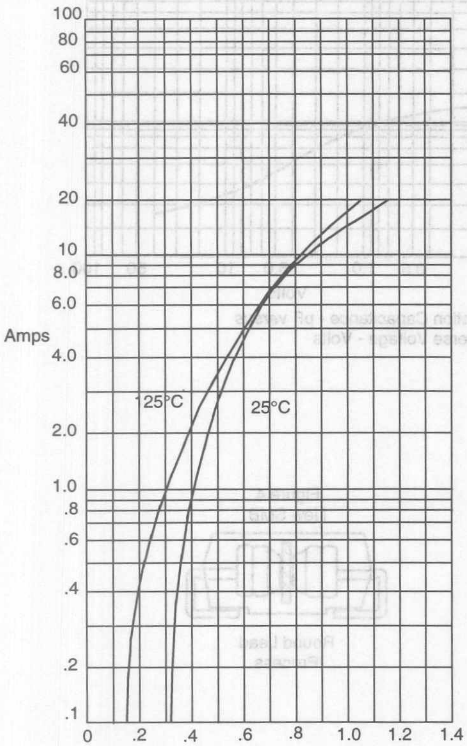
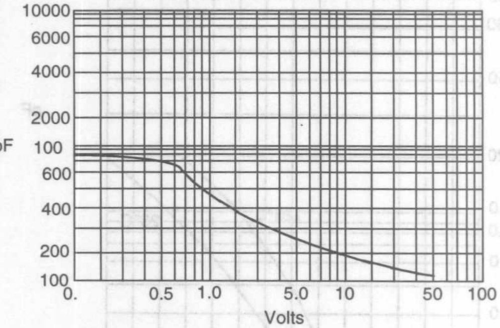


Figure 1
Typical Forward Characteristics



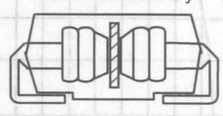
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 3
Typical Junction Capacitance



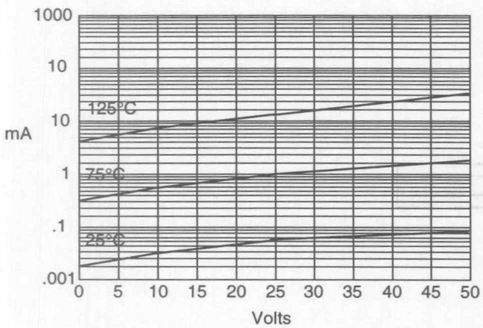
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
New SMB Assembly



Round Lead

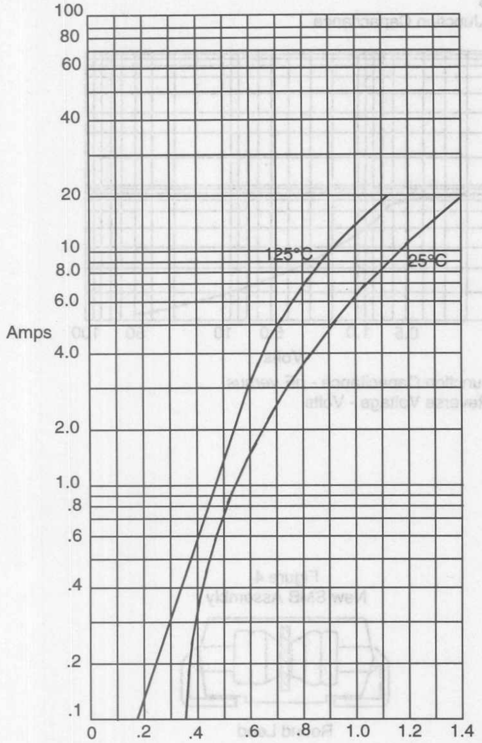
Figure 2
Typical Reverse Characteristics



Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

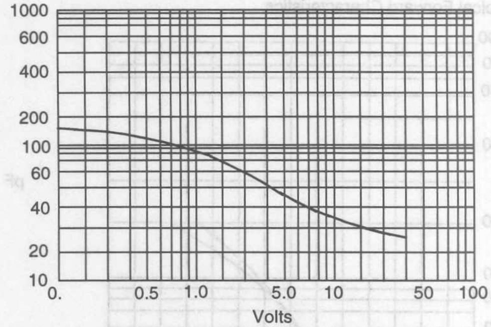
SK13 thru SK110

Figure 1
Typical Forward Characteristics



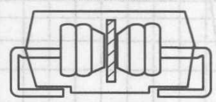
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 3
Typical Junction Capacitance



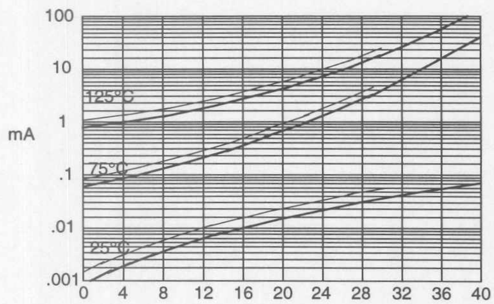
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
New SMB



Round Lead
Process

Figure 2
Typical Reverse Characteristics



SK13
SK14

Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

Microsemi
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Chatsworth, Ca 91311
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Fax: (818) 701-4939

SK225

2 Amp Schottky Rectifier

Features

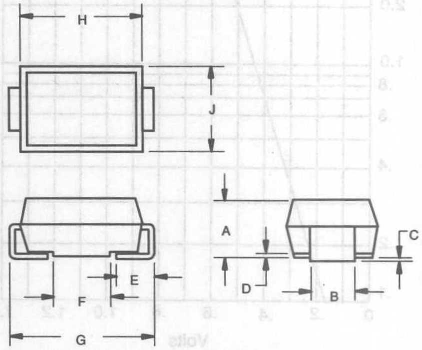
- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Reverse Energy Tested
- High Current Capability
- Extremely Low Thermal Resistance

Maximum Ratings

- Operating Temperature: -40°C to +150°C
- Storage Temperature: -40°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead
- Weight: .003 ounces (.0093 grams) typical

Microsemi catalog Number	Device Marking	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SK225		25V	25V

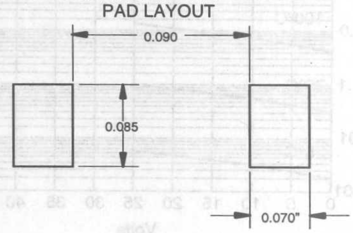
DO-214AA (SMBJ)



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.075	.115	1.90	2.92	1
B	.081	.087	2.06	2.21	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

1) Maximum Jedec Spec is .096" or 2.44 MM

SUGGESTED SOLDER PAD LAYOUT



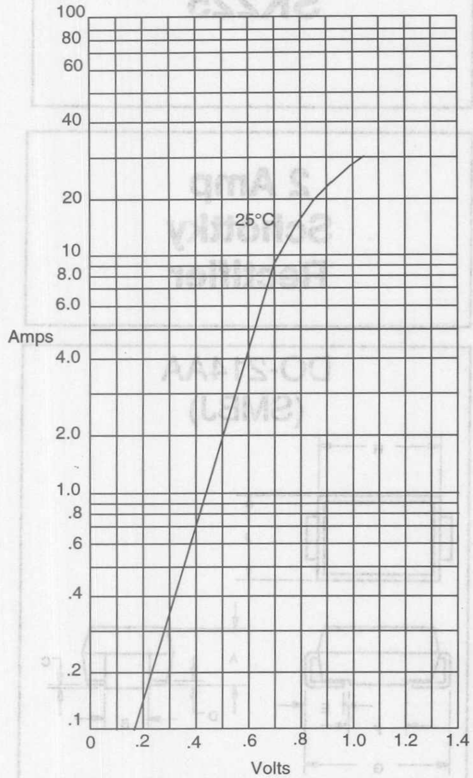
Electrical Characteristics @ 25°C Unless Otherwise Specified

Average forward current	$I_{F(AV)}$	2A	Square wave
Maximum surge current	I_{FSM}	50A	8.3ms, half sine, $T_J = 150°C$
Max peak forward voltage	V_{FM}	.55V	$I_{FM} = 2.0A$; $T_J = 25°C$*
Max peak reverse current	I_{RM}	500µA	V_{RRM}, $T_J = 25°C$
Typical junction capacitance	C_J	50pF	$V_R = 5.0V$, $T_J = 25°C$

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

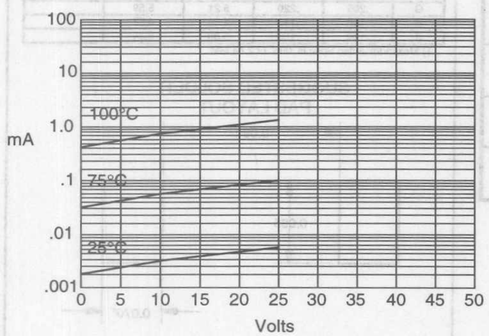
SK225

Figure 1
Typical Forward Characteristics



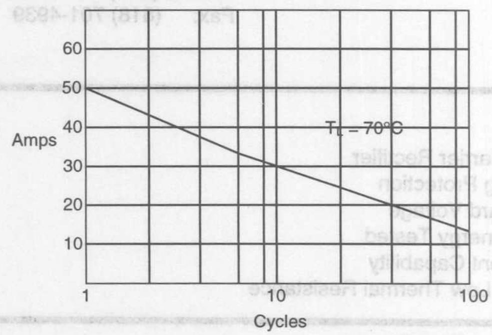
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



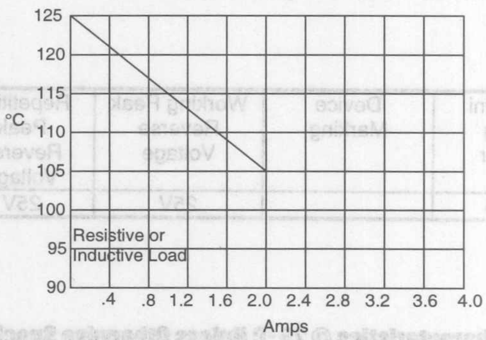
Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

Figure 3
Maximum Nonrepetitive Surge Current



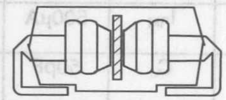
Peak Forward Current - Amperes *versus*
Number of Cycles at 60Hz

Figure 4
Forward Current Derating



Maximum Allowable Case Temperature - °C *versus*
Average Forward Current - Amperes

Figure 5
New SMB Assembly



Round Lead

Microsemi
Chatsworth, CA
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

SK32 THRU SK38

3 Amp Schottky Rectifier 20 to 80 Volts

Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals\
- High Current Capability With Low Forward Voltage

Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +125°C
- Maximum Thermal Resistance; 10°C/W Junction To Lead

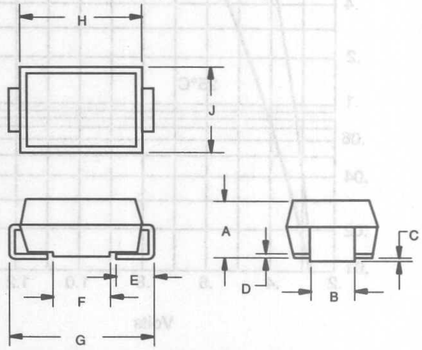
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SK32	SK32	20V	14V	20V
SK33	SK33	30V	21V	30V
SK34	SK34	40V	28V	40V
SK35	SK35	50V	35V	50V
SK36	SK36	60V	42V	60V
SK38	SK38	80V	56V	80V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	$T_J = 120°C$
Peak Forward Surge Current	I_{FSM}	100A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SK32-34 SK35-38	V_F	.50V .75V	$I_{FM} = 3.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	.5mA 20mA	$T_J = 25°C$ $T_J = 100°C$
Typical Junction Capacitance	C_J	45pF	Measured at 1.0MHz, V_R=4.0V

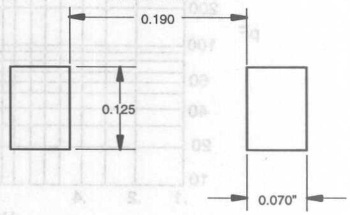
*Pulse test: Pulse width 200 μsec, Duty cycle 2%

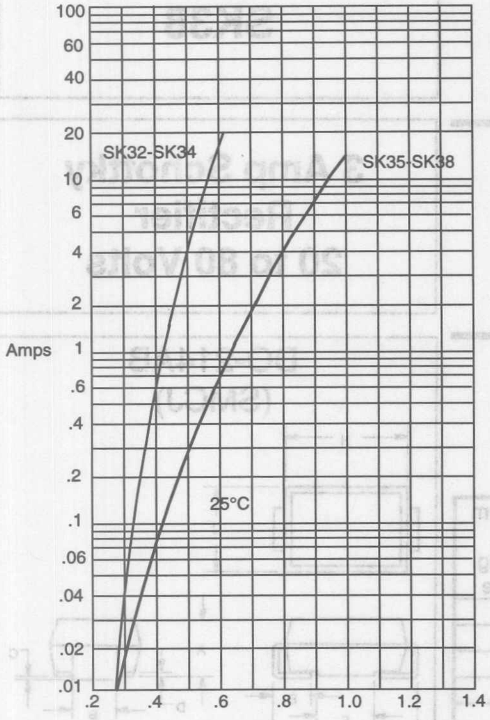
DO-214AB (SMCJ)



DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.075	.095	1.90	2.41	
B	.115	.121	2.92	3.07	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F					
G	.305	.320	7.75	8.13	
H	.260	.280	6.60	7.11	
J	.220	.245	5.59	6.22	

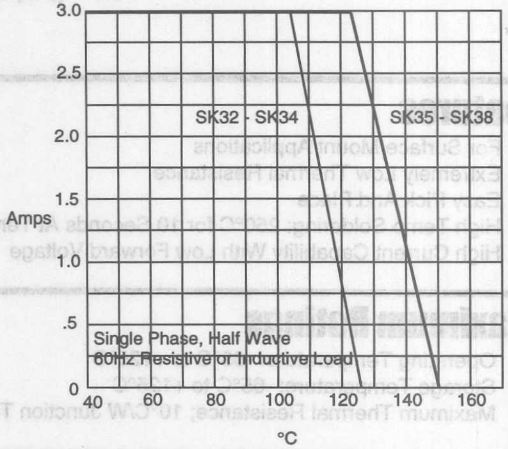
SUGGESTED SOLDER PAD LAYOUT





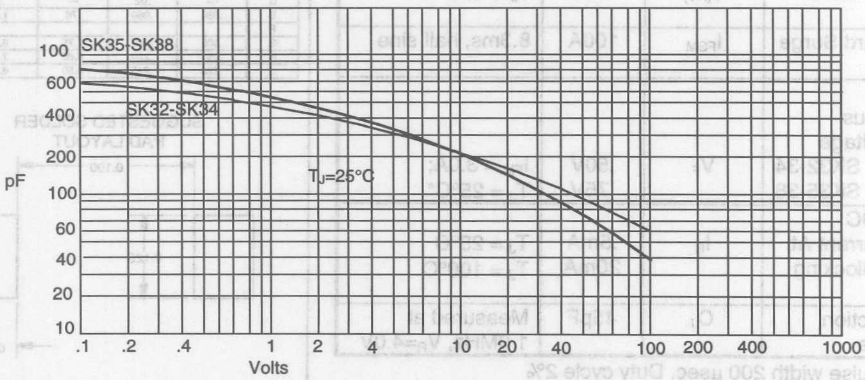
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



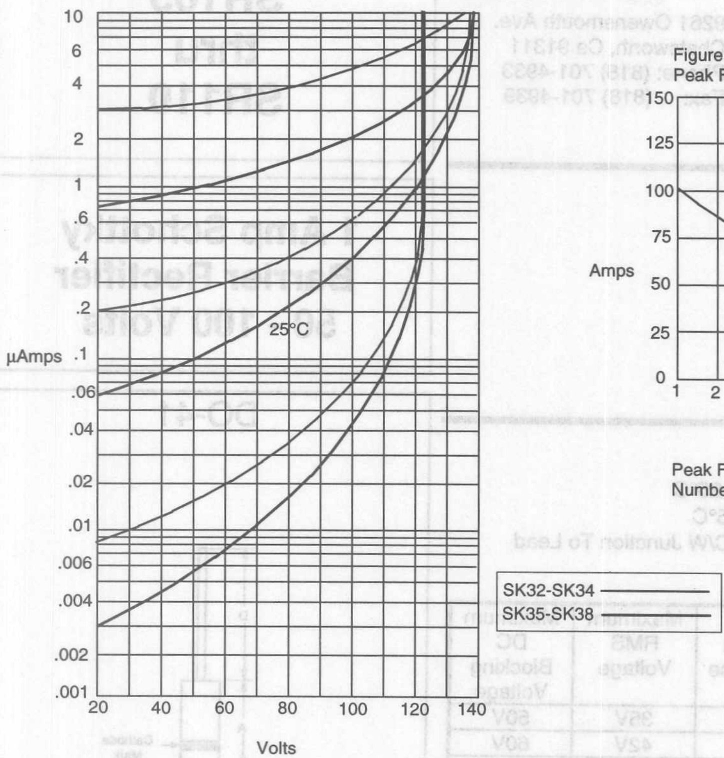
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



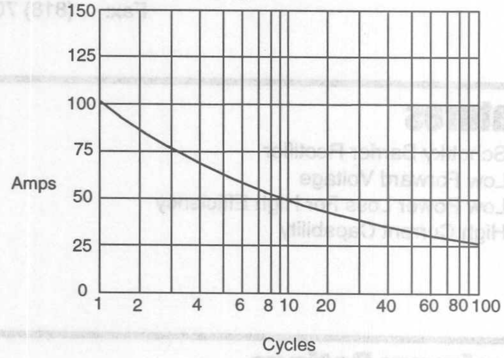
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi
Chatsworth, CA
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9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

SR105 thru SR110

1 Amp Schottky Barrier Rectifier 50 - 100 Volts

Features

- Schottky Barrier Rectifier
- Low Forward Voltage
- Low Power Loss For High Efficiency
- High Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 30°C/W Junction To Lead

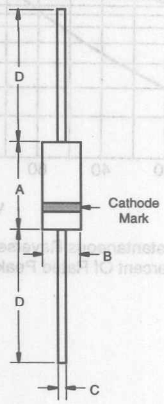
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SR105	SR105	50V	35V	50V
SR106	SR106	60V	42V	60V
SR108	SR108	80V	56V	80V
SR1010	SR1010	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_A = 75°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SR105-SR106 SR108-SR1010	V_F	.70V .80V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	0.5mA 10mA	$T_J = 25°C$ $T_J = 100°C$

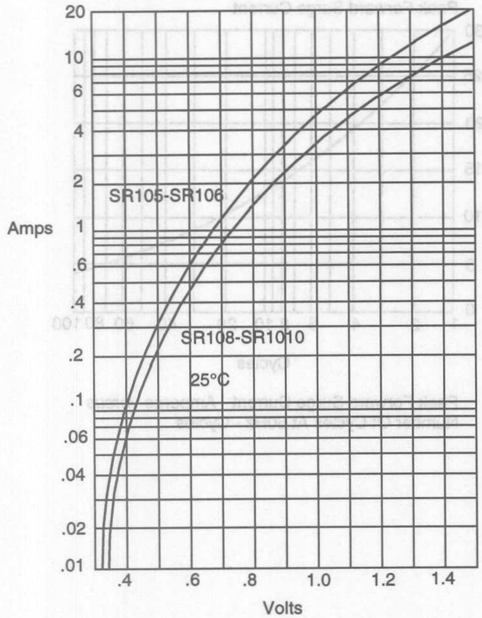
*Pulse test: Pulse width 300 μsec, Duty cycle 2%

DO-41



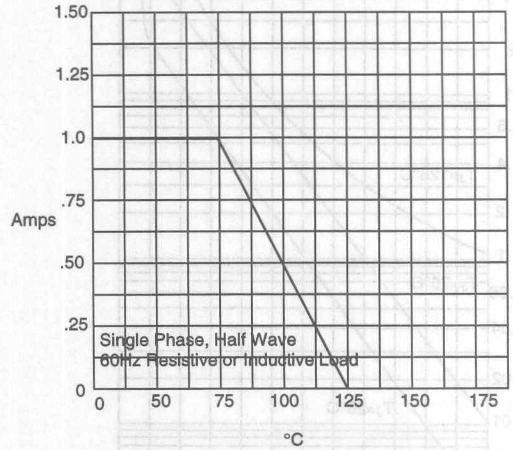
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



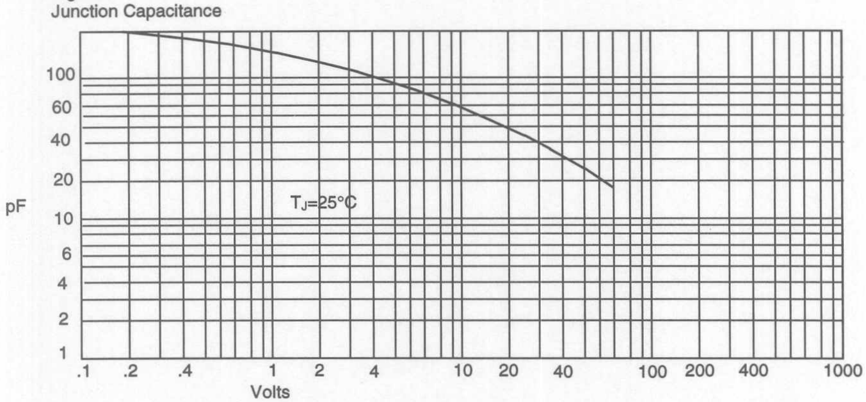
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



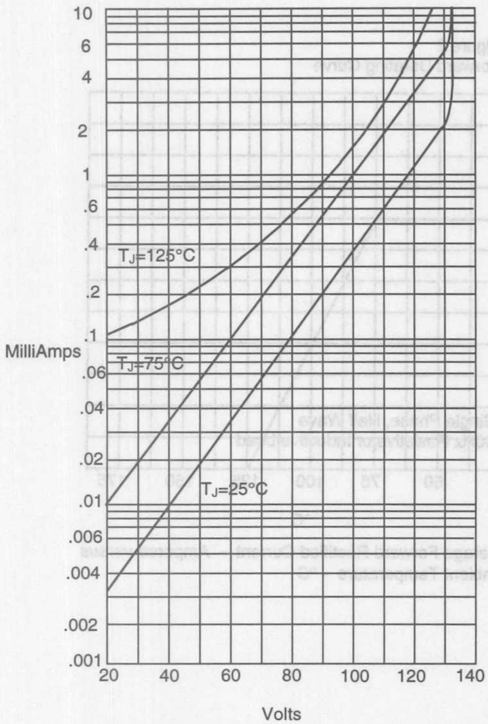
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



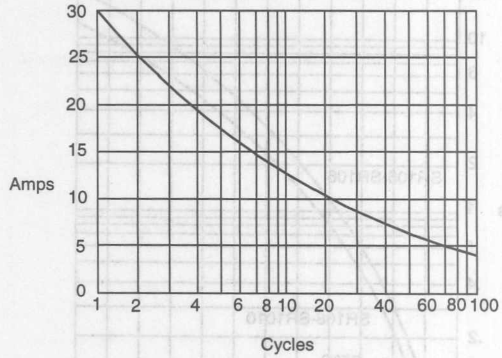
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Microsemi Chatsworth, CA
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

SR202

2 Amp Schottky Rectifier

Features

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Reverse Energy Tested
- High Current Capability
- Extremely Low Thermal Resistance

Maximum Ratings

- Operating Temperature: -40°C to +150°C
- Storage Temperature: -40°C to +150°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead
- Weight: .003 ounces (.0093 grams) typical

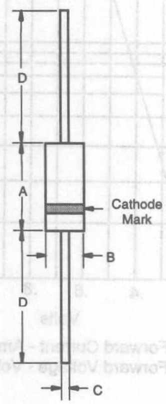
Microsemi catalog Number	Device Marking	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
SR202		20V	20V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average forward current	$I_{F(AV)}$	2A	Square wave
Maximum surge current	I_{FSM}	50A	8.3ms, half sine, T_J = 150°C
Max peak forward voltage	V_{FM}	.55V	I_{FM} = 2.0A; T_J = 25°C*
Max peak reverse current	I_{RM}	500µA	V_{RRM}, T_J = 25°C
Typical junction capacitance	C_J	50pF	V_R = 5.0V, T_J = 25°C

*Pulse test: Pulse width 300 µsec, Duty cycle 2%

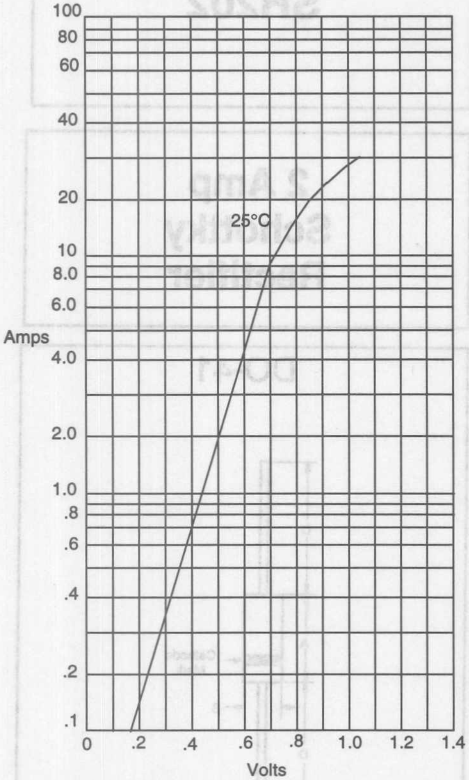
DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

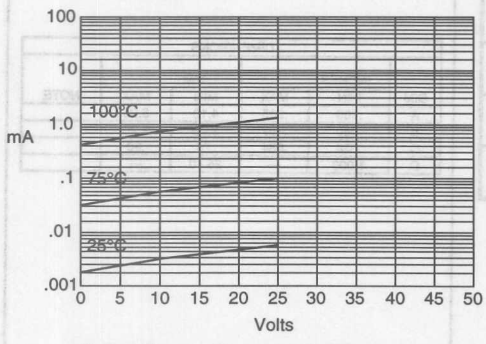
SR202

Figure 1
Typical Forward Characteristics



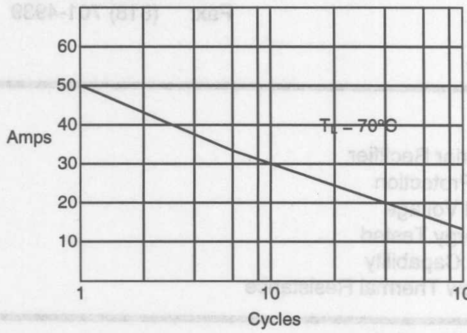
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



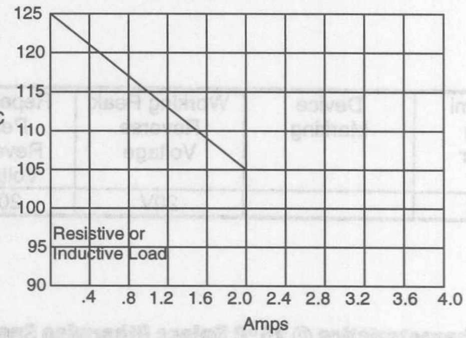
Typical Reverse Current - mA *versus*
Reverse Voltage - Volts

Figure 3
Maximum Nonrepetitive Surge Current



Peak Forward Current - Amperes *versus*
Number of Cycles at 60Hz

Figure 4
Forward Current Derating



Maximum Allowable Case Temperature - °C *versus*
Average Forward Current - Amperes

Chatsworth, CA

Microsemi

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Chatsworth, Ca 91311
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Fax: (818) 701-4939

SR305 thru SR3010

3 Amp Schottky Barrier Rectifier 50 - 100 Volts

Features

- Low Switching Noise
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 30°C/W Junction To Ambient

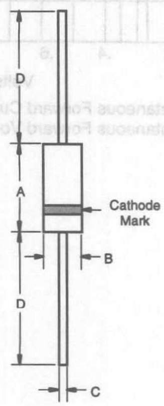
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SR305	---	50V	35V	35V
SR306	---	60V	42V	42V
SR308	---	80V	56V	56V
SR3010	---	100V	70V	70V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3.0A	$T_A = 85°C$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SR305-306 SR308-3010	V_F	.72V .80V	$I_{FM} = 3.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	3.0mA 30mA	$T_J = 25°C$ $T_J = 100°C$
Typical Junction Capacitance	C_J	200pF	Measured at 1.0MHz, V_R=4.0V

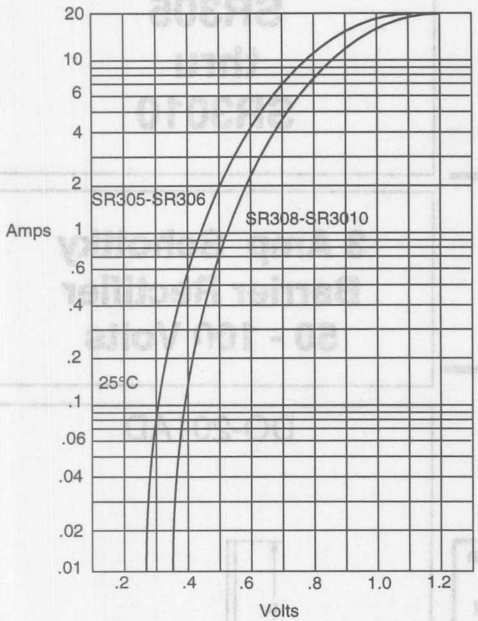
*Pulse test: Pulse width 300 μsec, Duty cycle 1%

DO-201AD



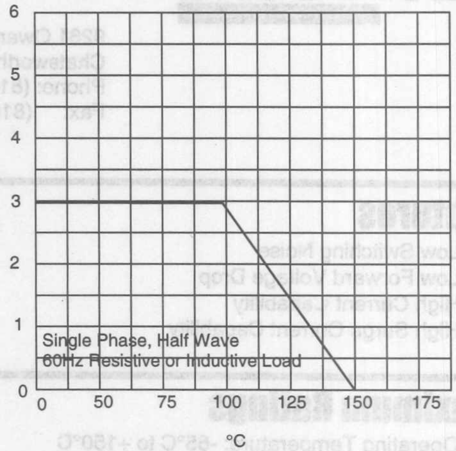
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



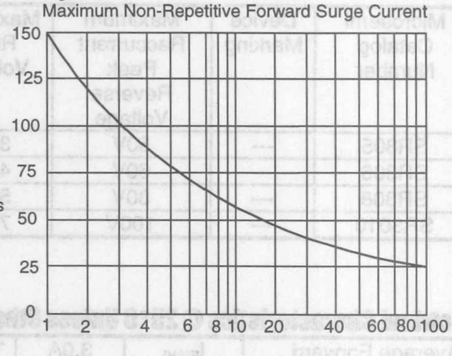
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



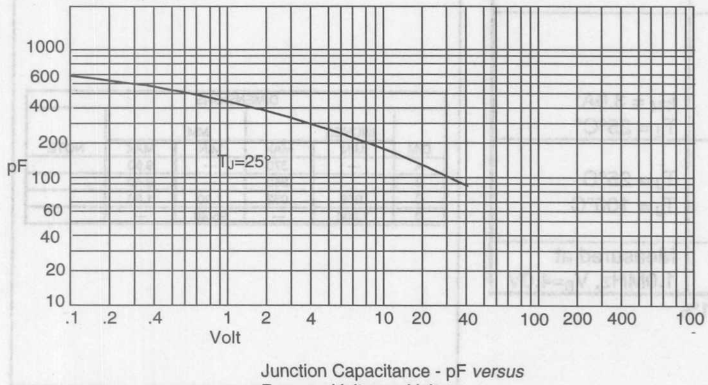
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure3
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 4
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Chatsworth, CA
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Chatsworth, Ca 91311
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SR502 thru SR510

5 Amp Schottky Barrier Rectifier 50 - 100 Volts

Features

- Low Switching Noise
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 18°C/W Junction To Ambient

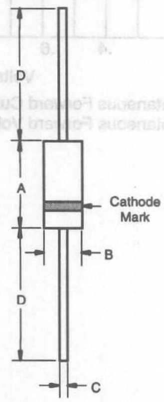
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SR502	SR502	20V	14V	20V
SR503	SR503	30V	21V	30V
SR504	SR504	40V	28V	40V
SR505	SR505	50V	35V	50V
SR506	SR506	60V	42V	60V
SR508	SR508	80V	56V	80V
SR510	SR510	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	5.0A	$T_A = 85°C$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SR502-SR504 SR505-SR506 SR508-SR510	V_F	 .55V .70V .75V	$I_{FM} = 5.0A$; $T_A = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	1.0mA	$T_A = 25°C$
Typical Junction Capacitance	C_J	200pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 μsec, Duty cycle 1%

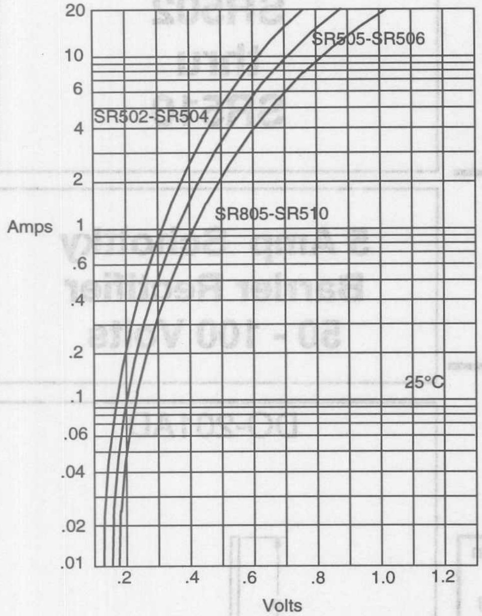
DO-201AD



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

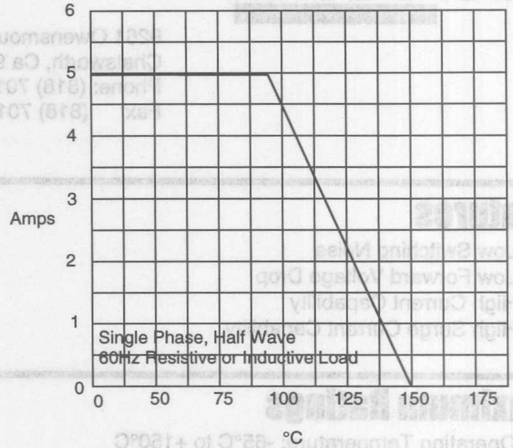
SR502 thru SR510

Figure 1
Typical Forward Characteristics



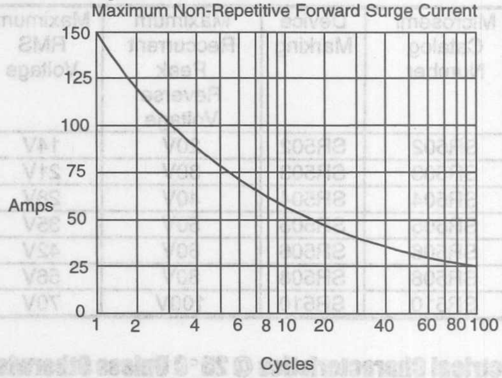
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



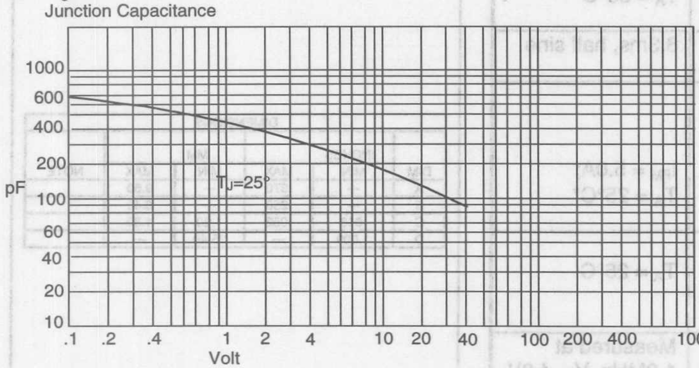
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure3
Maximum Non-Repetitive Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 4
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Microsemi
Chatsworth, CA
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Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

SS12 thru SS100

1 Amp Schottky Rectifier 20 - 100 Volts

Features

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Reverse Energy Tested
- High Current Capability
- Extremely Low Thermal Resistance

Maximum Ratings

- Operating Temperature: -65°C to +125°C
- Storage Temperature: -65°C to +150°C
- Maximum Thermal Resistance; 35°C/W Junction To Lead

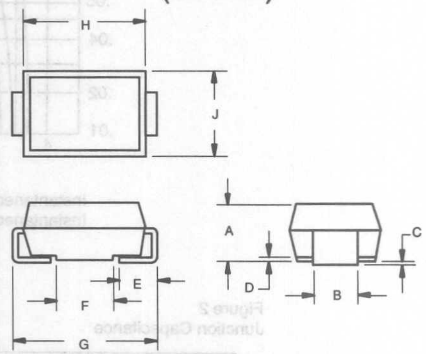
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SS12	SS12	20V	14V	20V
SS13	SS13	30V	21V	30V
SS14	SS14	40V	28V	40V
SS15	SS15	50V	35V	50V
SS16	SS16	60V	42V	60V
SS18	SS18	80V	56V	80V
SS100	SS100	100V	70V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_J = 25°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage SS12-SS14 SS15-SS16 SK18-SS100	V_F	 .55V .70V .85V	$I_{FM} = 1.0A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	.5mA 20mA	$T_A = 25°C$ $T_A = 100°C$
Typical Junction Capacitance SK12 SK13-SK110	C_J	 230pF 50pF	Measured at 1.0MHz, V_R=4.0V

*Pulse test: Pulse width 300 μsec, Duty cycle 2%

DO-214AC (SMAJ)



DIM	INCHES MIN	INCHES MAX	MM MIN	MM MAX	NOTE
A	.078	.115	1.98	2.29	1
B	.052	.058	1.32	1.47	
C	---	.005	---	.127	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.194	.208	4.93	5.28	
H	.157	.177	3.99	4.50	
J	.100	.110	2.57	2.79	

SUGGESTED SOLDER PAD LAYOUT

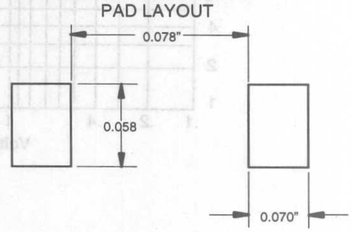
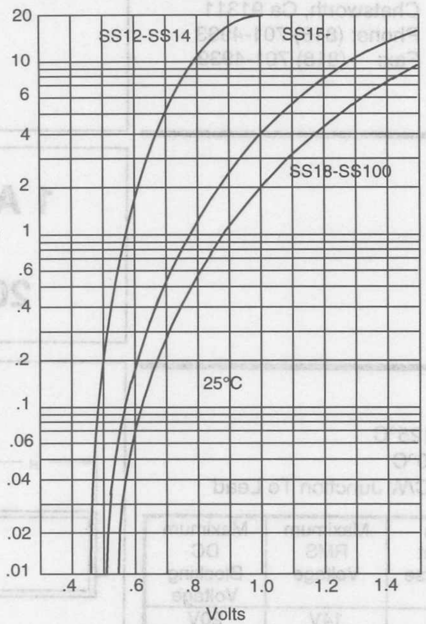
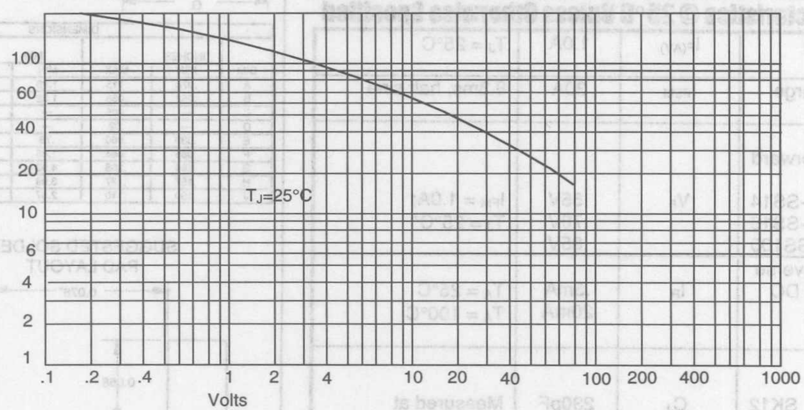


Figure 1
Typical Forward Characteristics



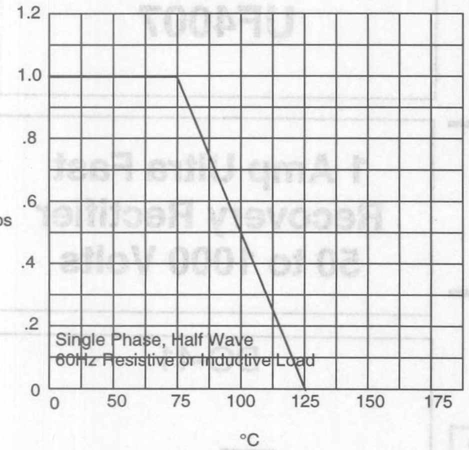
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Junction Capacitance



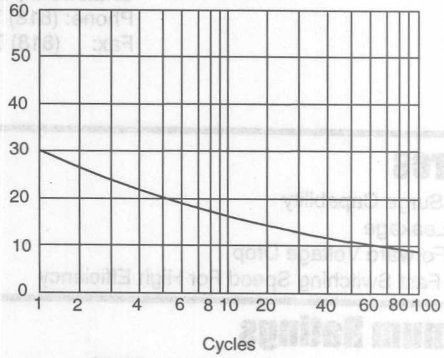
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 3
Forward Derating Curve



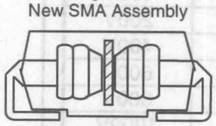
Average Forward Rectified Current - Amperes *versus* Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus* Number Of Cycles At 60Hz - Cycles

Figure 5
New SMA Assembly



Round Lead

Chatsworth, CA
Microsemi
Progress Powered by Technology

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

UF4001 THRU UF4007

1 Amp Ultra Fast Recovery Rectifier 50 to 1000 Volts

Features

- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- Ultra Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Typical Thermal Resistance 25°C/W

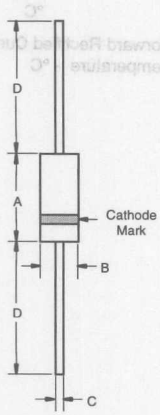
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
UF4001	---	50V	35V	50V
UF4002	---	100V	70V	100V
UF4003	---	200V	140V	200V
UF4004	---	400V	280V	400V
UF4005	---	600V	420V	600V
UF4006	---	800V	560V	800V
UF4007	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage UF4001-4004 UF4005-4007	V_F	1.0V 1.4V	$I_{FM} = 1.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 50μA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time UF4001-4004 UF4005-4007	T_{rr}	50ns 75ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance UF4001-4004 UF4005-4007	C_J	20pF 15pF	Measured at 1.0MHz, V_R=4.0V

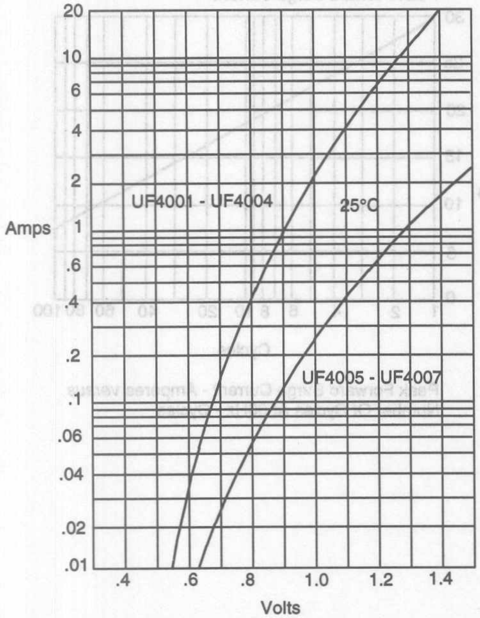
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

DO-41



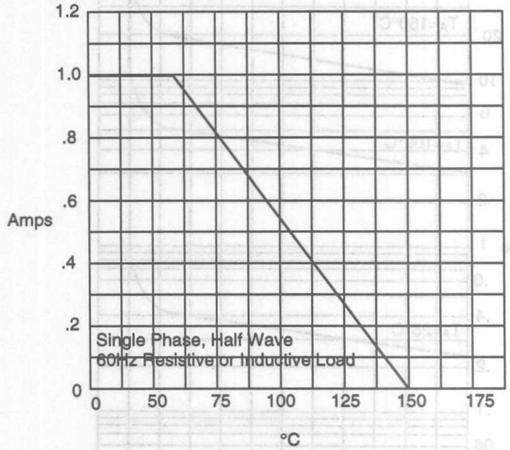
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



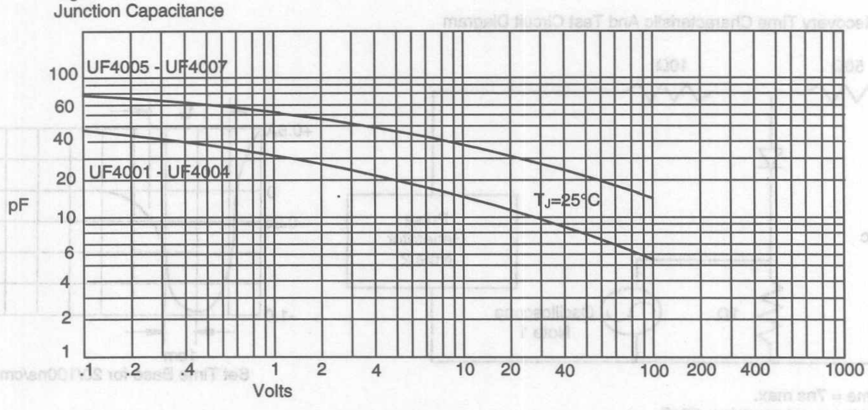
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



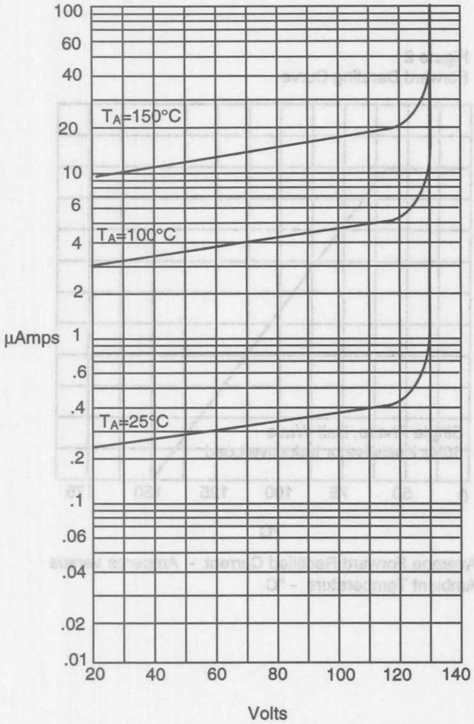
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



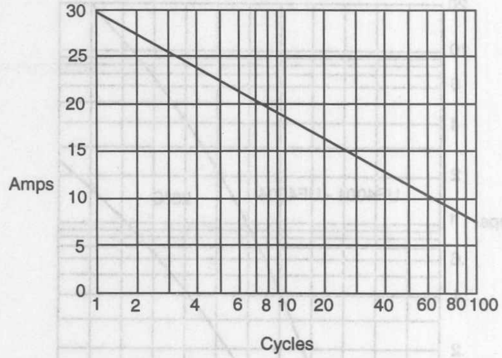
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



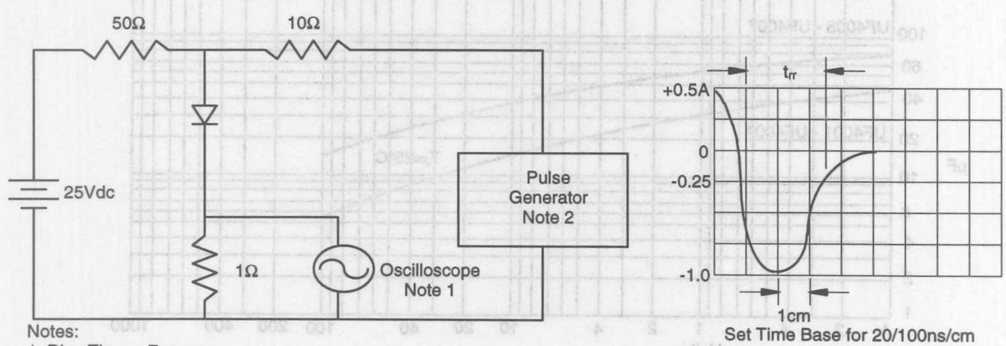
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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UF4001GP THRU UF4007GP

1 Amp Glass Passivated Ultra Fast Recovery Rectifier 50 to 1000 Volts

Features

- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- Ultra Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Typical Thermal Resistance 25°C/W

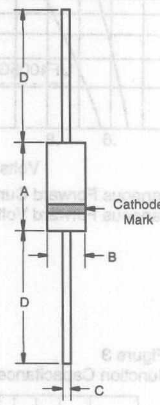
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
UF4001GP	---	50V	35V	50V
UF4002GP	---	100V	70V	100V
UF4003GP	---	200V	140V	200V
UF4004GP	---	400V	280V	400V
UF4005GP	---	600V	420V	600V
UF4006GP	---	800V	560V	800V
UF4007GP	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	30A	8.3ms, half sine
Maximum Instantaneous Forward Voltage UF4001GP-4004GP UF4005GP-4007GP	V_F	1.0V 1.4V	$I_{FM} = 1.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 50µA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time UF4001GP-4004GP UF4005GP-4007GP	T_{rr}	50ns 75ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance UF4001GP-4004GP UF4005GP-4007GP	C_J	20pF 15pF	Measured at 1.0MHz, V_R=4.0V

*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

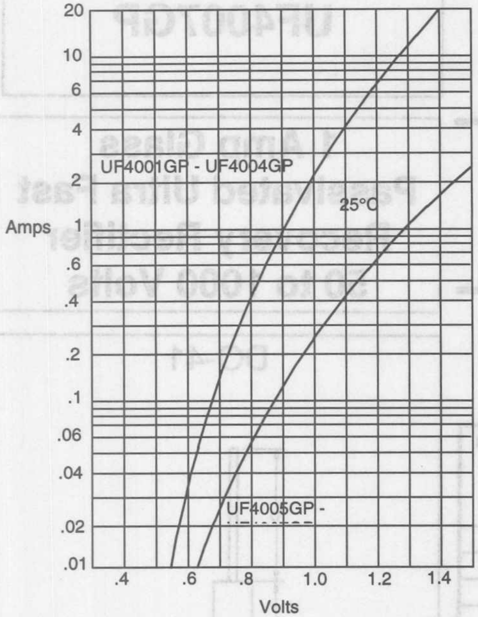
DO-41



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

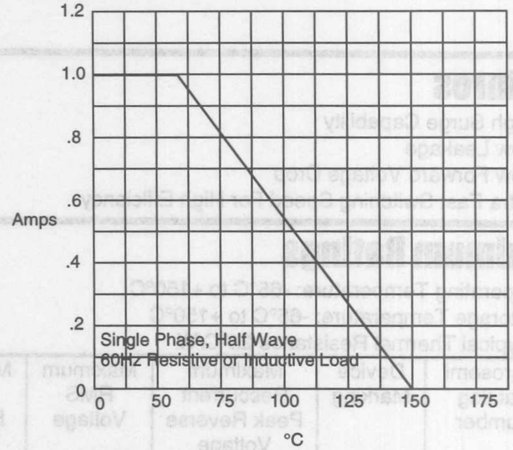
UF4001GP thru UF4007GP

Figure 1
Typical Forward Characteristics



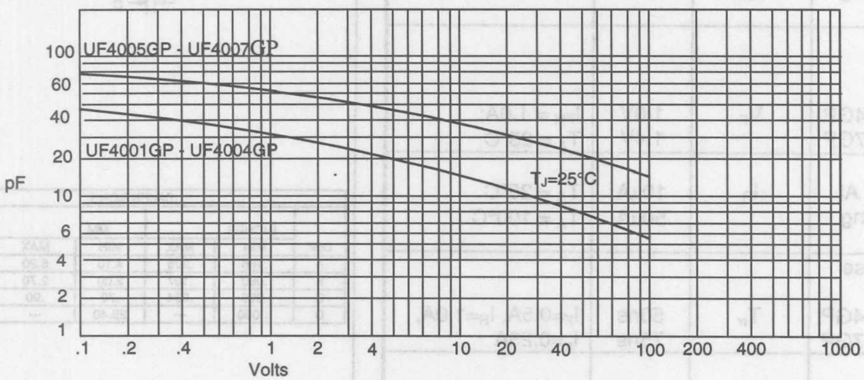
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

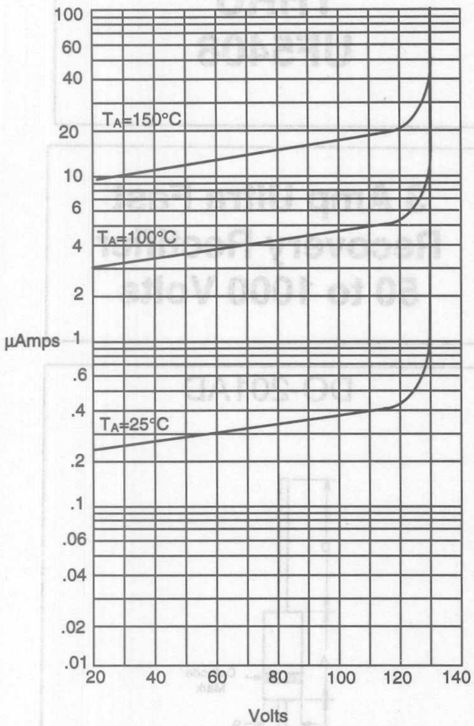
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

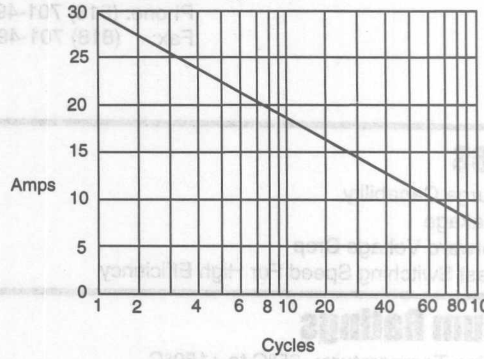
UF4001GP thru UF4007GP

Figure 4
Typical Reverse Characteristics



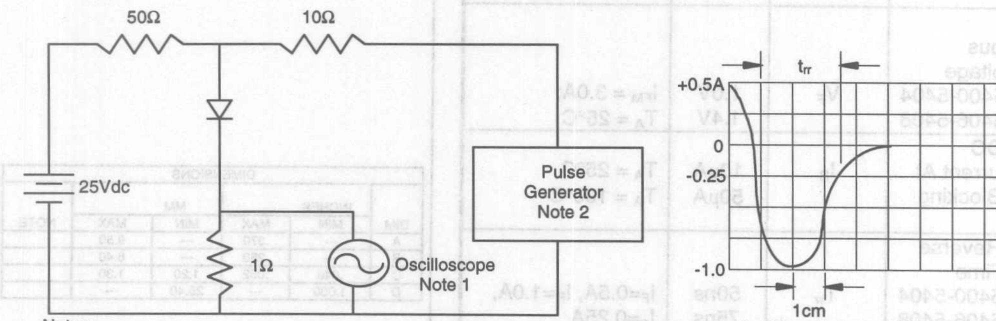
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Set Time Base for 20/100ns/cm

Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

9261 Owensmouth Ave.
Chatsworth, Ca 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

THRU
UF5408

3 Amp Ultra Fast Recovery Rectifier 50 to 1000 Volts

Features

- High Surge Capability
- Low Leakage
- Low Forward Voltage Drop
- Ultra Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Typical Thermal Resistance 20°C/W

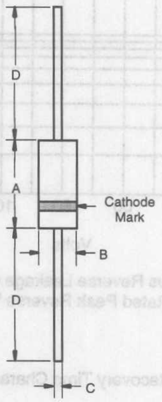
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
UF5400	---	50V	35V	50V
UF5401	---	100V	70V	100V
UF5402	---	200V	140V	200V
UF5404	---	400V	280V	400V
UF5406	---	600V	420V	600V
UF5407	---	800V	560V	800V
UF5408	---	1000V	700V	1000V

Electrical Characteristics @ 25 °C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage UF5400-5404 UF5406-5408	V_F	1.0V 1.4V	$I_{FM} = 3.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 50µA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time UF5400-5404 UF5406-5408	T_{rr}	50ns 75ns	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance UF5400-5404 UF5406-5408	C_J	75pF 50pF	Measured at 1.0MHz, V_R=4.0V

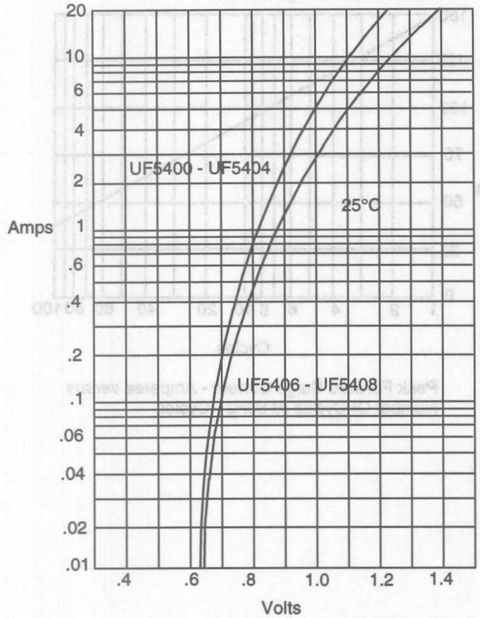
*Pulse Test: Pulse Width 300µsec, Duty Cycle 1%

DO-201AD



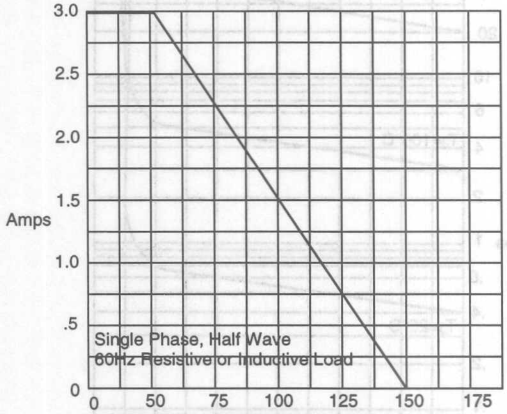
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



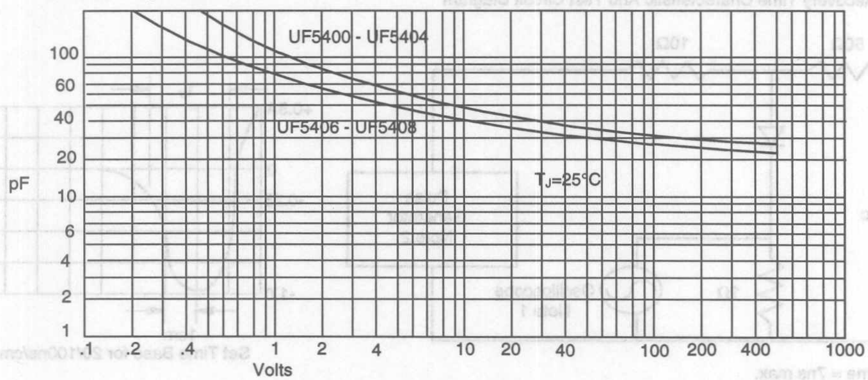
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



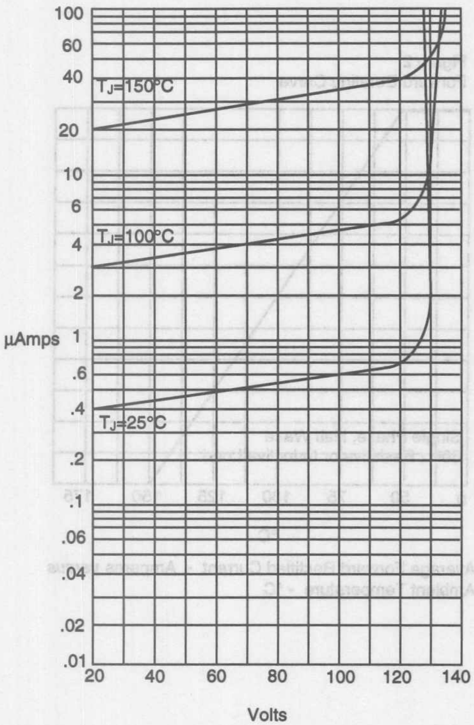
Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 3
Junction Capacitance



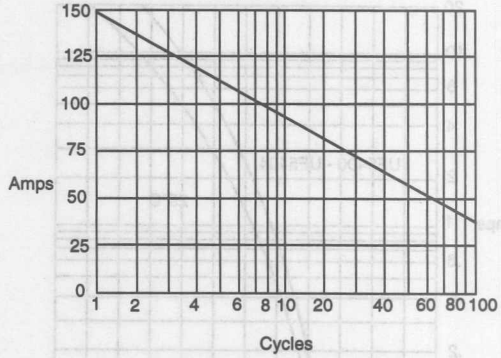
Junction Capacitance - pF *versus*
Reverse Voltage - Volts

Figure 4
Typical Reverse Characteristics



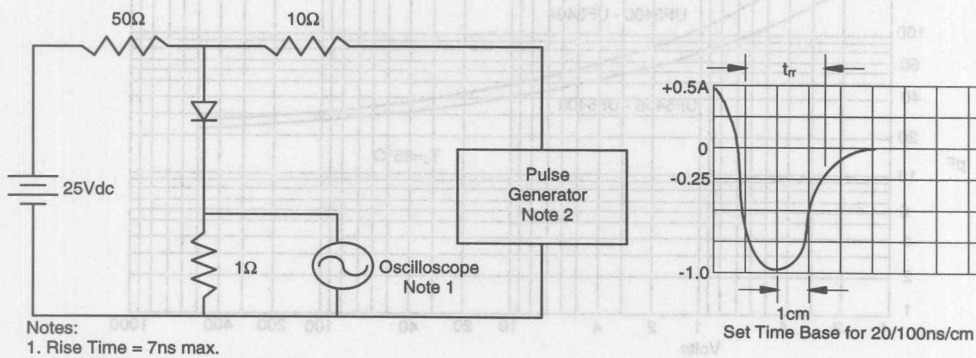
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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Fax: (818) 701-4939

UF5400GP THRU UF5408GP

3 Amp Ultra Fast Glass Passivated Recovery Rectifier 50 to 1000 Volts

Features

- High Surge Capability
- Glass Passivated Junction
- Low Forward Voltage Drop
- Ultra Fast Switching Speed For High Efficiency

Maximum Ratings

- Operating Temperature: -65°C to +150°C
- Storage Temperature: -65°C to +150°C
- Typical Thermal Resistance 20°C/W

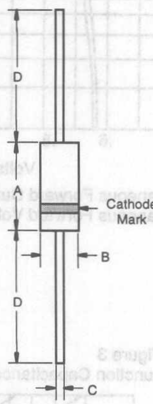
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
UF5400GP	---	50V	35V	50V
UF5401GP	---	100V	70V	100V
UF5402GP	---	200V	140V	200V
UF5404GP	---	400V	280V	400V
UF5406GP	---	600V	420V	600V
UF5407GP	---	800V	560V	800V
UF5408GP	---	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	3 A	$T_A = 55°C$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Maximum Instantaneous Forward Voltage UF5400GP-5404GP UF5406GP-5408GP	V_F	 1.0V 1.4V	 $I_{FM} = 3.0A$; $T_A = 25°C$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10μA 50μA	$T_A = 25°C$ $T_A = 100°C$
Maximum Reverse Recovery Time UF5400GP-5404GP UF5406GP-5408GP	T_{rr}	 50ns 75ns	 I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
Typical Junction Capacitance UF5400GP-5404GP UF5406GP-5408GP	C_J	 75pF 50pF	 Measured at 1.0MHz, V_R=4.0V

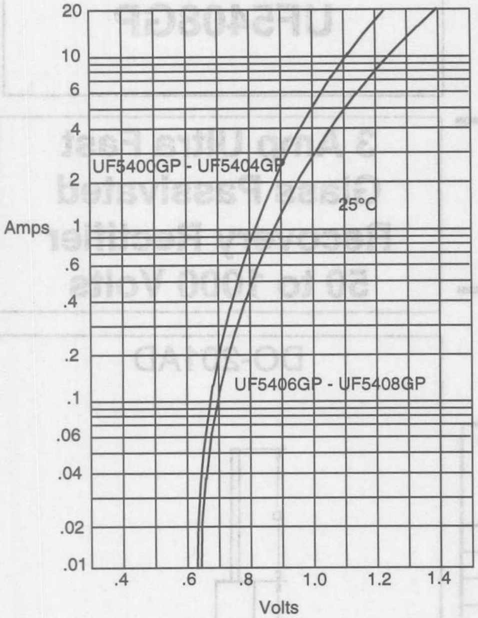
*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

DO-201AD



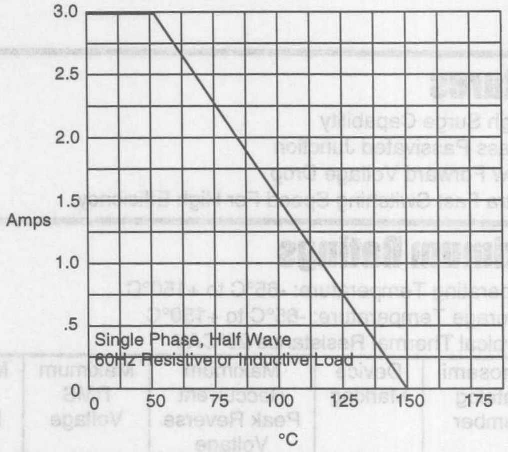
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.370	---	9.50	
B	---	.250	---	6.40	
C	.048	.052	1.20	1.30	
D	1.000	---	25.40	---	

Figure 1
Typical Forward Characteristics



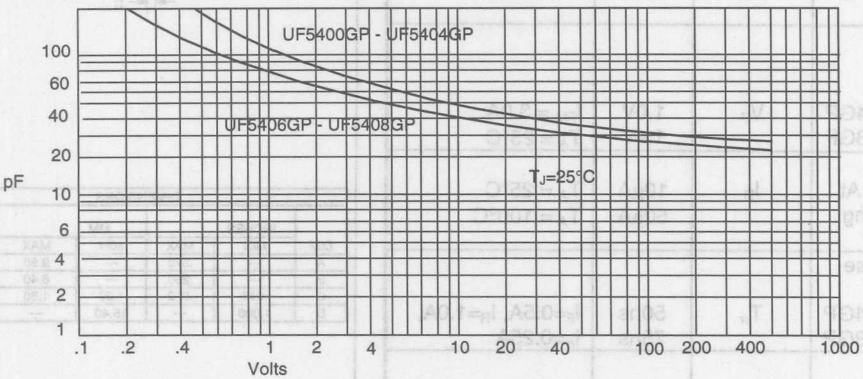
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

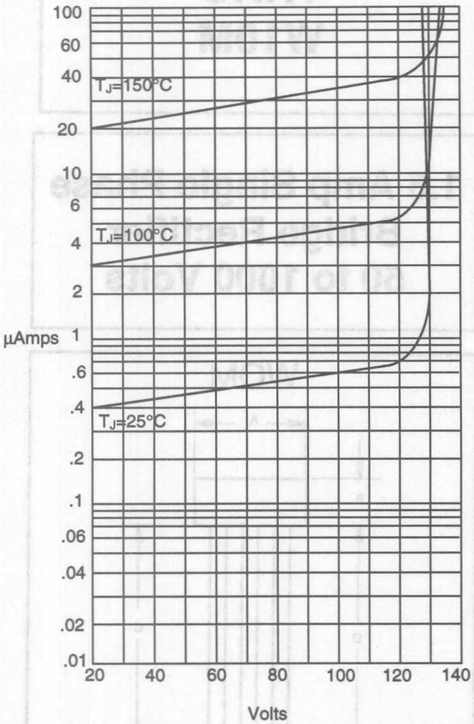
Figure 3
Junction Capacitance



Junction Capacitance - pF *versus*
Reverse Voltage - Volts

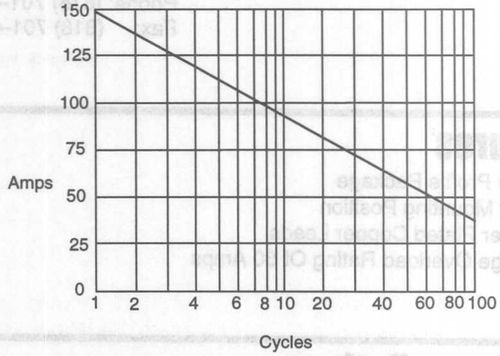
UF5400GP thru UF5408GP

Figure 4
Typical Reverse Characteristics



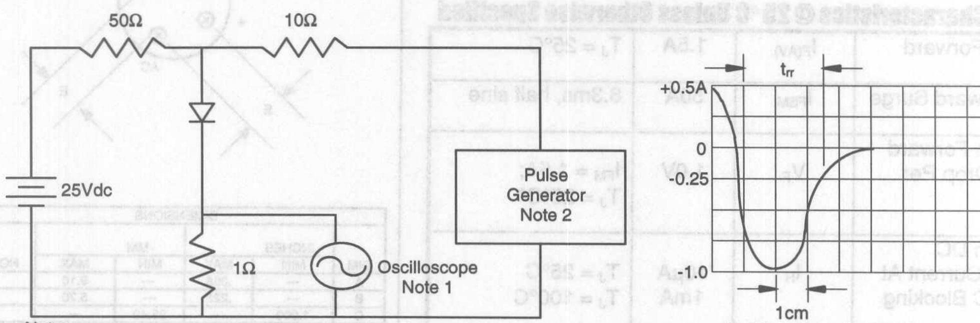
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

Figure 6
Reverse Recovery Time Characteristic And Test Circuit Diagram



Set Time Base for 20/100ns/cm

Notes:
1. Rise Time = 7ns max.
Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
Source impedance = 50 ohms
3. Resistors are non-inductive

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Chatsworth, Ca 91311
Phone: (818) 701-4933
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W005M THRU W10M

1.5 Amp Single Phase Bridge Rectifier 50 to 1000 Volts

Features

- Low Profile Package
- Any Mounting Position
- Silver Plated Copper Leads
- Surge Overload Rating Of 50 Amps

Maximum Ratings

- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C

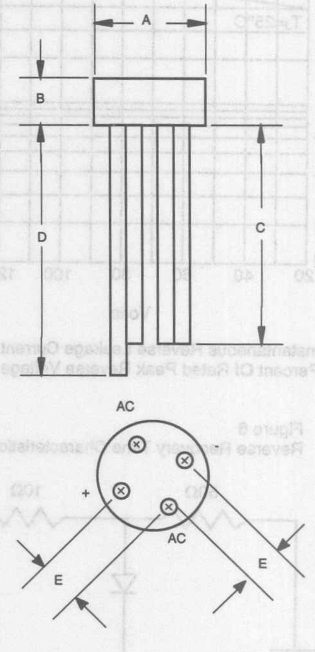
Microsemi Catalog Number	Device Marking	Maximum Reccurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
W005M	W005M	50V	35V	50V
W01M	W01M	100V	70V	100V
W02M	W02M	200V	140V	200V
W04M	W04M	400V	280V	400V
W06M	W06M	600V	420V	600V
W08M	W08M	800V	560V	800V
W10M	W10M	1000V	700V	1000v

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.5A	$T_J = 25°C$
Peak Forward Surge Current	I_{FSM}	50A	8.3ms, half sine
Maximum Forward Voltage Drop Per Element	V_F	1.0V	$I_{FM} = 1.5A$; $T_J = 25°C$*
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	10µA 1mA	$T_J = 25°C$ $T_J = 100°C$

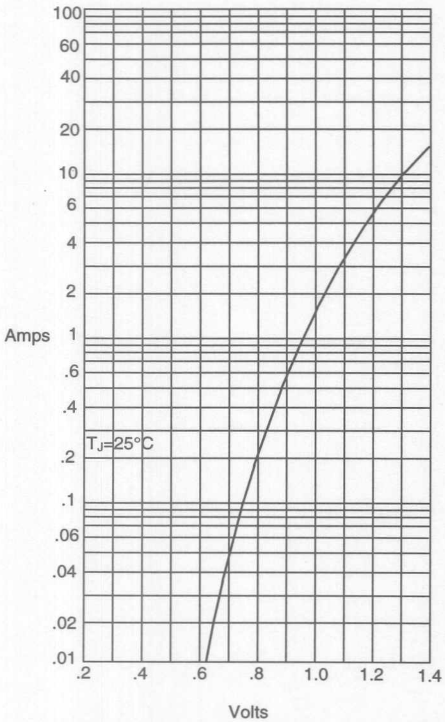
*Pulse test: Pulse width 300 µsec, Duty cycle 1%

WOM



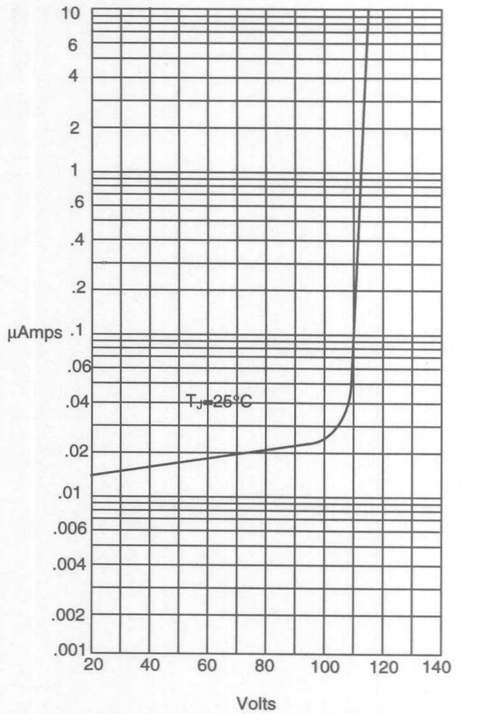
DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	---	.358	---	9.10	
B	---	.225	---	5.70	
C	1.000	---	25.40	---	
D	1.200	---	30.50	---	
E	.180	.220	4.60	5.60	

Figure 1
Typical Forward Characteristics



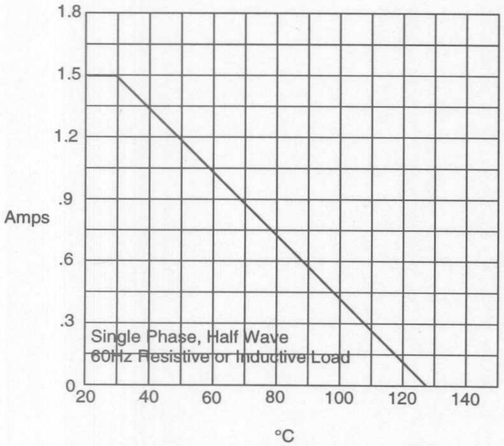
Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics



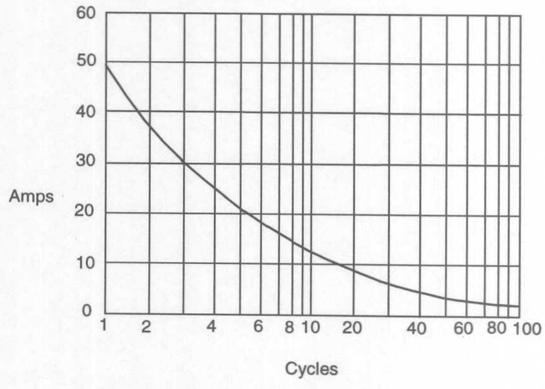
Instantaneous Reverse Leakage Current - MicroAmperes *versus*
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature - °C

Figure 4
Peak Forward Surge Current



Peak Forward Surge Current - Amperes *versus*
Number Of Cycles At 60Hz - Cycles

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Section 6

Product Packaging Information

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PRODUCT PACKAGING INFORMATION

SURFACE MOUNT

Minimum Package Quantities

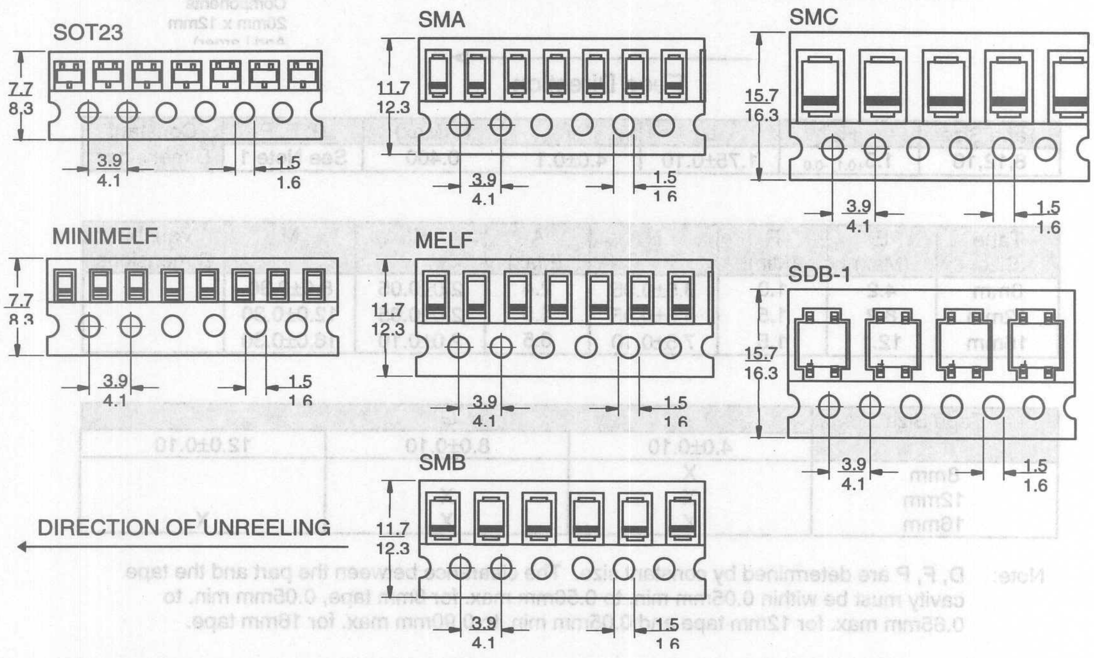
TYPE	BULK/TUBE QUANTITY	7 INCH REEL QUANTITY	13 INCH REEL QUANTITY
SOT23	-----	3,000	-----
MINIMELF	-----	-----	10,000
MELF	-----	-----	5,000
SMA	-----	-----	5,000
SMB	-----	-----	3,000
SMC	-----	-----	3,000
SDB-1	50	-----	1,500

Note: These are minimum package quantities only. Minimum orders will differ. Contact Microsemi Chatsworth for more information on minimum order quantities.

TAPE DIMENSIONS AND ORIENTATION

(in millimeters)

8mm Tape | 12mm Tape | 16mm Tape



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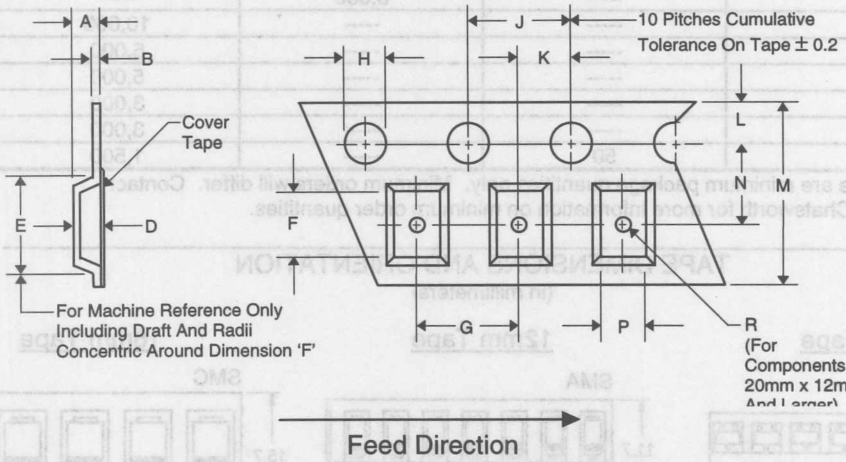
PRODUCT PACKAGING INFORMATION

SURFACE MOUNT

Embossed Carrier Tape Specifications (8, 12, 16 mm Tape)



Tape Size	H	L	J	B (Max)	D, F, P	Constant Dimensions
8,12,16	$1.5_{+0.1,\,-0.0}$	1.75±0.10	4.0±0.1	0.400	See Note 1	

Tape Size	E (Max)	R (Min)	N	A (Max)	K	M	Variable Dimensions
8mm	4.2	1.0	3.5±0.05	2.4	2.0±0.05	8.0±0.30	
12mm	8.2	1.5	5.5±0.05	4.5	2.0±0.05	12.0±0.30	
16mm	12.1	1.5	7.5±0.10	6.5	2.0±0.10	16.0±0.30	

Tape Size	G		
	4.0±0.10	8.0±0.10	12.0±0.10
8mm	X		
12mm	X	X	
16mm	X	X	X

Note: D, F, P are determined by constant size. The clearance between the part and the tape cavity must be within 0.05mm min. to 0.50mm max. for 8mm tape, 0.05mm min. to 0.65mm max. for 12mm tape and 0.05mm min. to 0.90mm max. for 16mm tape.

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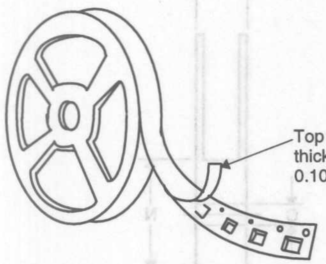
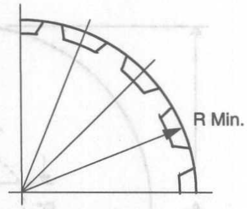
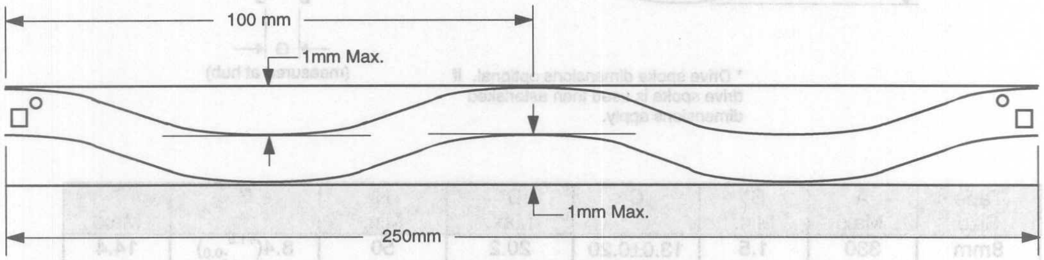




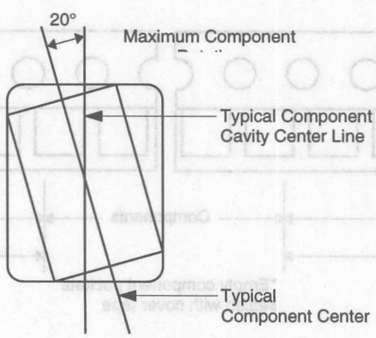
Bending Radius

Tape Size	R Min.
8mm	25mm
12mm	30mm
16mm	40mm



Camber (Top View)

Allowable camber to be 1mm/100mm non-accumulative over 250mm



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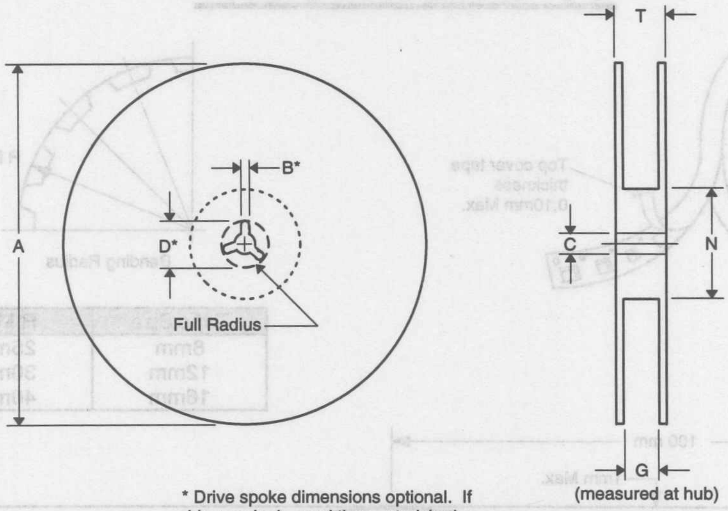
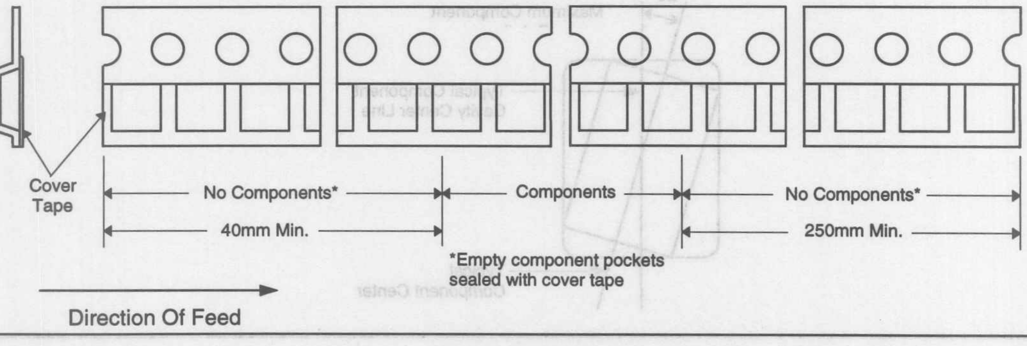
SURFACE MOUNT



* Drive spoke dimensions optional. If drive spoke is used then asterisked dimensions apply.

Tape Size	A Max.	B* Min.	C	D* Max.	N Min.	G	T Max.
8mm	330	1.5	13.0±0.20	20.2	50	$8.4(^{+1.5}_{-0.0})$	14.4
12mm	330	1.5	13.0±0.20	20.2	50	$12.4(^{+2.0}_{-0.0})$	18.4
16mm	330	1.5	13.0±0.20	20.2	50	$16.4(^{+2.0}_{-0.0})$	22.4

Start And Finish Specifications



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PRODUCT PACKAGING INFORMATION

THROUGH HOLE - AXIAL LEADED

Minimum Package Quantity

Case Style	Available Packaging				
	Bulk			13" Tape & Reel	Ammo Pack
	Box Qty	Tube Qty	Tray Qty	Qty	Qty
A-405				5K	
BR-6	200		200		
BR-8D	400				
DB-1		50			
DO-15	1K			4K	
DO-201AD	500			1.2K	
DO-35	500			10K	5K
DO-41	1K			5K	5K
MP-35/MB-35	100		100		
MP-35W/MB-35W	100		100		
MP-50/MB-50	100		100		
MP-50W/MB-50W	100		100		
PB-6/PB-3	200		200		
R-3	500			3K	
R-6	200			500	
RA/SRA	2000				
RB-15	1K				
RS-4L	100		100		
RS-6	100		100		
TO-92	2K				5K
WOL	600				
WOM	1K				

* Please note that these are packing minimums only and do reflect order minimums. For order minimums please contact Microsemi Chatsworth.

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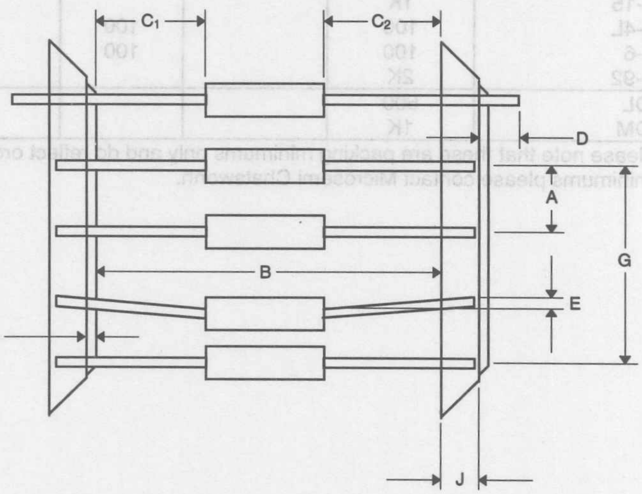
PRODUCT PACKAGING INFORMATION

THROUGH HOLE - AXIAL LEADED

Taping Specifications

Description	Dimension	Case Style	Specification(mm)
Component Pitch	A	DO-15, DO-35, DO-41 A-405, R-3	5.0±0.5
		DO-201AD, R-6	1.0±0.5
Inside Tape Spacing	B	All	52.4±1.5
Lead To Lead Eccentricity	[C_1 - C_2]	All	1.4 Max.
Lead Extension	D	All	0.8 Max.
Lead Bending	E	All	1.2 Max.
Cumulative Pitch	G	All	2.0 per 10 pitch
Exposed Adhesive	H	All	0.8 Max.
Tape Width	J	All	6.0±0.4
Tape Leader	Beginning and end of reel or ammo pack		300.0 Min.
Empty Spaces	Consecutive missing components not allowed		<0.1%
Polarity Marking	All polarized components shall be oriented in the same direction. The cathode tape shall be colored and the anode tape shall be white or light beige.		



Dimensions apply to both sides of the reel

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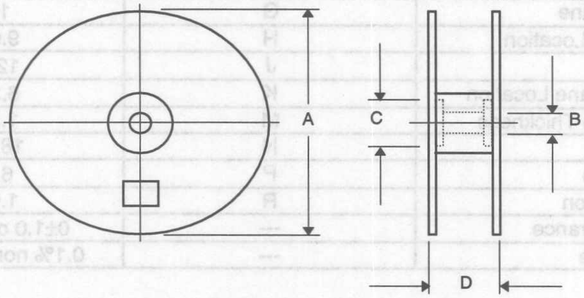
PRODUCT PACKAGING INFORMATION

THROUGH HOLE - AXIAL LEADED

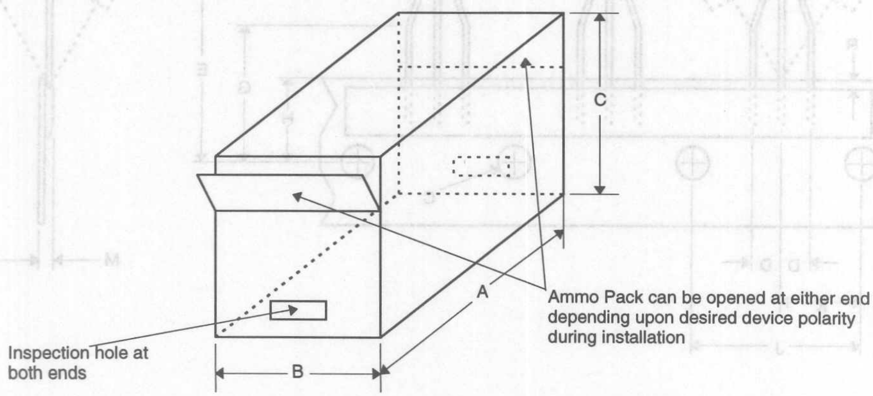
Reel Dimensions

Description	Dimension	Specification(mm)
Reel Diameter	A	330 335 (DO-35 Only)
Core Diameter (Outside Dimension)	B	58.7±0.3
Arbor Hole Diameter	C	16.6±0.4
Reel Width	D	79.0±1.0



Ammo Pack Dimensions

Description	Dimension	Specification(mm typical)
Length	A	260
Width	B	75
Heigth	C	140



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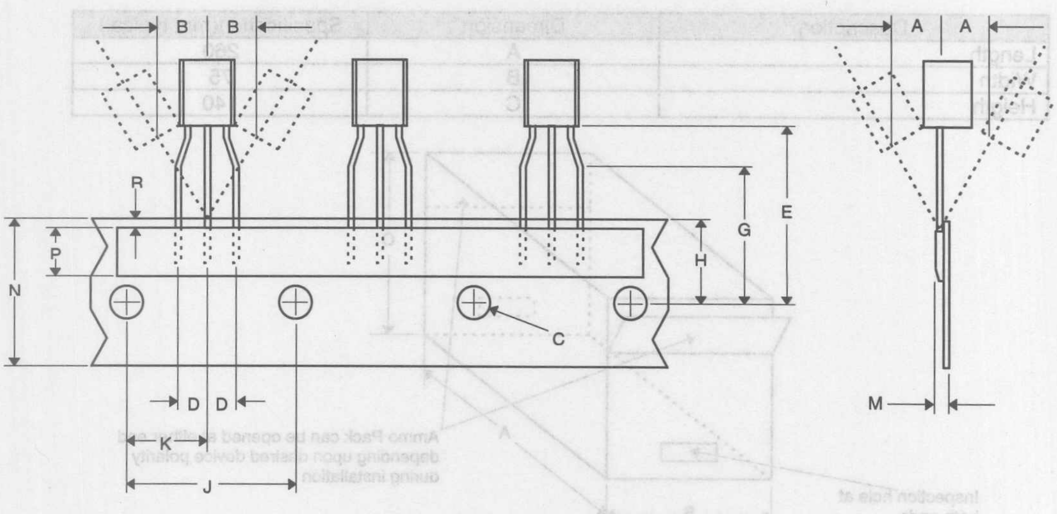
PRODUCT PACKAGING INFORMATION

THROUGH HOLE - TO-92

Taping Specifications

Description	Dimension	Specification(mm)
Front To Rear Deflection	A	0±1.0
Left To Right Deflection	B	0±1.0
Feed Hole Diameter	C	4.0±0.2
Component Lead Pitch	D	$2.5^{+0.4}_{-0.1}$
Feed Hole To Bottom Of Component	E	21.0 Max.
Height Of Seating Plane	G	16±0.5
Height Of Feed Hole Location	H	$9.0^{+0.8}_{-0.5}$
Feed Hole Pitch	J	12.7±0.3
Center Of Seating Plane Location	K	6.35±0.5
Tatal Taped Package Thickness	M	1.5 Max.
Carrier Tape Width	N	$18.0^{+1.0}_{-0.5}$
Adhesive Tape Width	P	6.0±0.5
Adhesive Tape Position	R	1.0 Max.
Feed Hole Pitch Tolerance	---	0±1.0 over 20 pitch
Empty Places in Tape	---	0.1% non-consecutive



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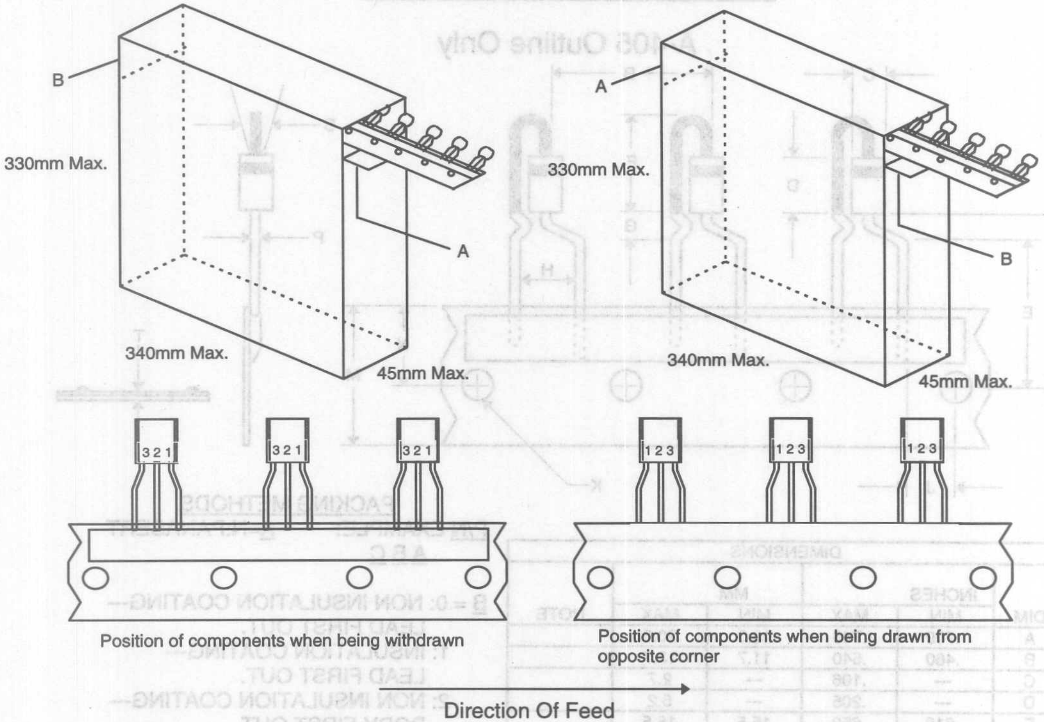
PRODUCT PACKAGING INFORMATION

THROUGH HOLE - TO-92

Ammo Pack Specifications



Position of components when being withdrawn

Position of components when being drawn from opposite corner

Notes: 1) The carrier tape consists of a cardboard strip with sprocket holes. The pins of the transistors are secured radially to the carrier tape with a heat seal type tape.
2) The tape can be taken from either of the two opposite corners, depending on the desired pin sequence.
3) The label will include a minimum of the part number, quantity and date code.
4) Each ammo pack consists of layers of 25 devices each folded in a concertina fashion. One component is missing at the end of each layer. Each position is identified by means of a double perforation across the tape. The tape is folded at the perforations.

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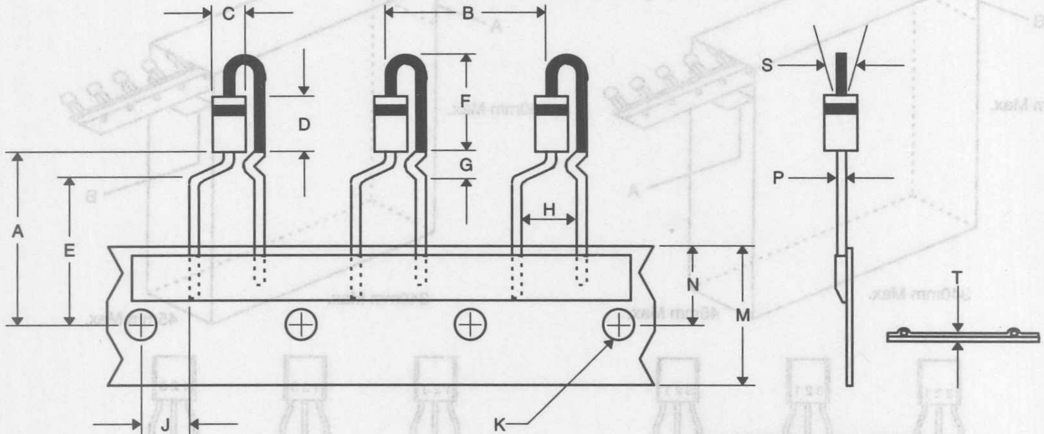
PRODUCT PACKAGING INFORMATION

RADIAL TAPING SPECIFICATIONS FOR RECTIFIERS

A-405 Outline Only



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.709	.748	18.0	20.0	
B	.460	.540	11.7	13.7	
C	---	.106	---	2.7	
D	---	.205	---	5.2	
E	.610	.650	15.5	16.5	
F	---	.354	---	9.0	
G	---	.177	---	4.5	
H	.177	.217	4.5	5.5	
J	.124	.179	3.15	4.55	
K	.146	.169	3.7	4.3	
M	.677	.748	17.2	19.0	
N	.343	.384	8.70	9.75	
P	.021	.025	.54	.64	
S	---	±.079	---	±2.0	
T	.016	.031	.4	.8	

PACKING METHODS

P/N EXAMPLE: A=N:PANASERT
A B C

B = 0: NON INSULATION COATING--- LEAD FIRST OUT.
1: INSULATION COATING--- LEAD FIRST OUT.
2: NON INSULATION COATING--- BODY FIRST OUT.
3: INSULATION COATING--- BODY FIRST OUT.

C = 1: FOR CATHODE DOWN, IN BULK.
2: FOR CATHODE UP, IN BULK.
3: FOR CATHODE DOWN, IN REEL.
4: FOR CATHODE UP, IN REEL.